

RXSOL MARINE PRODUCT CHEMICAL MANUAL

Rxmarine International BSEL Tech Park A-wing Room no-105 Opp. Vashi Railway Station (navi Mumbai)

Chemical Manual

We have sold over a million Liters of RXSOL products without a failure. We put this down to the fact that, as manufacturers, we total control of the raw materials we use and our manufacturing process. Many of our competitors source their tank cleaner have form third parties abroad and cannot stand by their products as confidently as we can.

RX MARINE INTERNATIONAL is a manufacturer and distributor that specialize in providing custom solutions. Whether it is private labeling, custom packaging, chemical manufacturing or product sourcing, we have the team in place to make business with us as simple as possible. We provide excellent products and service to markets. Our customer located worldwide.

We have sold over a million Liters of RXSOL products without a failure. We put this down to the fact that, as manufacturers, we have total control of the raw materials we use and our manufacturing process. Many of our competitors source their tank cleaner form third parties abroad and cannot stand by their products as confidently as we can.

RX MARINE INTERNATIONAL (ISO CERTIFIED) is a pioneer in the field of marine chemical in India having commenced operation in 1996. As an independent company it manufactures RXSOL brand Industrial / Shipping, Tank cleaning products & chemical of PVC polymer additives, (Heat Stabilizers).

RX Cleansers was established in 1996 in Mumbai, India; as a chemical manufacturing company catering exclusively to the needs of the marine industry. In a span of 16 years the company has established itself as one of the leading wholesale marine chemical suppliers of a wide range of marine chemicals both to the marine industry internationally and other local industries and plants. Our client list bears testimony to this. The RXSOL policy has its foundations on two pillars of strength - a continuous investment in research and development to deliver premium quality products and a commitment to service.

We offer a wide range of marine chemical products to include maintenance, tank cleaning and water treatment, fuel oil treatment, swimming pool chemicals. We are committed to the safety of the environment and hence most of our products are eco-friendly, bio-degradable and meet international quality standards.

We are presently operative in all the seaports of INDIA and having tied up with DUBI CHEM to cater for the requirements of all vessels calling at the UAE ports.

We are currently in the process of obtaining IMO Certification.

Chemicals Manual

- MAINTENANCES CHEMICALS
- TANK CLEANING CHEMICALS
- WATER BASED ECO CHEMICALS
- COOLING WATER TREATMENT
- BOILER WATER TREATMENT
- EVOPORATOR TREATMENT
- FUEL OIL TREATMENT
- HOME CARE/DECK ITEM
- TEST KITS

INDEX

MAINTENANCES CHEMICALS 1

:-By Rxmarine International

TANK CLEANING CHEMICALS 2

:-By Rxmarine International

WATER BASED ECO CHEMICALS 3

:-By Rxmarine International

COOLING WATER TREATMENT 4

:-By Rxmarine International

BOILER WATER TREATMENT 5

:-By Rxmarine International

EVOPORATOR TREATMENT 6

:-By Rxmarine International

FUEL OIL TREATMENT 7

:-By Rxmarine International

HOME CARE / DECK ITEMS 8

:-By Rxmarine International

TEST KITS 9

:-By Rxmarine International

Product Comparison Chart With Other

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Maintenance Chemical						
Air Cooler Cleaner	RXSOL 16-0009	Air Cooler Cleaner	ACC - 9	ACC-79101	Air Cooler Cleaner B-80	Air cooler cleaner
All Purpose Cleaner	RXSOL-12-1501	-	-	-	-	-
Carbon Remover	RXSOL-16-1003	Carbon Remover	Carbon Remover	SEA SHIELD- 79106	Carbon Remover B-85	Carbon Remover
Degreaser Heavy Duty	Rxsol-10-1005	Cold wash	Grease Remover	SEA SHIELD- 79115	Degreaser GP-B-248	Cold wash/GP degr.
Water Soluble Degreaser	Rxsol-10-1005	-	Drew Clean-2000	Citricent	-	Eco-clean
Disc Cleaner	RXSOL-16-1007	Disclean	Ameroid DC	SEA SHIELD- 79107	-	-
Scale Remover	RXSOL-11-1008	Descleaning Liquid	Descale IT	Descalent	-	
Scale Remover Dry Powder	RXSOL-54-1008	Descalex	Safe Acid	Dry- Acid-0-068	Descalent FB 145	Descleaning Liquid
Electric Motor & Machinery Cleaner	Rxsol-16-1009-MCB	Electrosolve-E	Dew Electric-2000	Electroclean E	ECS Fast Dry	-
-	Electrosol Quick Dry	-	-	-	-	-
Hand Cleaner Waterless Cream	RXSOL-16-1001	Natural Hand Cleaner	-	-	-	Hand cleaner
Metal Bright	RXSOL-20-1011	Metal Bright	Ameroid RSR	Metal Brite-9-061	Rust Cleaner L-704	Rust Olt
Oil Spill Dispersant	RXSOL-17-1012	Secare OSD	OSD /LT	Maxi-Clean-2	Oil Spill Disp-B-1425	-

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Tank Cleaning Chemical						
Tank Clean H.D.	RXSOL-20-2001	Tankclean	TC-4	Maxi-Break 9-044	Tank Clean B-1430	-
Seaclean	RXSOL-20-2002	Seaclean	-	-	Tank Clean B	Seaclean
Cold Wash	Rxsol-20-2003	Cold Wash	HDE-777	-	-	-
Alkaline Safety Liquid	Rxsol-20-2004	Alkaline Safety liquid	-	-	-	-
Alkleen Liquid	RXSOL-20-2005	Alkleen Liquid	LAC	Alkaline Cleaner (Liquid)	Water Based Alkaline	alkaclean
Chembreak	RXSOL-20-2006	Clean break	Drewclean-2000	-	-	Clean break

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Eco-Friendly(water Based Chemical)						
Enviroclean	RXSOL-20-3001	Enviroclean	Enviroment-2000	-	-	Ecoclean
Alkaline Degreaser	RXSOL-20-3002	Aquatuff	-	-	-	-
Aquabreak RX	Rxsol-20-3003	Aquabreak PX	-	-	-	Marisol
Universal Wash	RXSOL-20-3004	Uni-Wash	Drew-NBD	-	-	Genpol
High Pressure Wash	**RXSOL-22-3005**	HP. Wash	-	-	-	-
Ultrasonic Cleaner	**RXSOL-16-3006**	Ultrasonic Cleaner	-	-	-	-

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Water Treat For Cooling System						
Roco NB	**RXSOL-40-4001**	Rocor NB	Liquid (EWT)	Nalcool-2000	CWT	-
Diesel Guard	**RXSOL-40-4002**	Dieselguard NB	Dewt NC	9-121 P	CWT Diesel QC-2	-
Bio-Guard	**Rxsol-40-4003**	Bio-Guard	-	9-321 Antifoulant	-	Biosperse

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Water Treat For Boiler System						
BWT Universal (one shot)	**RXSOL-50-5001**	Liquitreat	AGK # 100	BWT Liquid Plus	BWT QC-3	BWT one shot
Alkalinity Control	**Rxsol-50-5002**	Alkalinity Control	Ameroid GC	9-214 C(P)	BWT QC-3 II	Alkalinity Control
Boiler Cogulant	**Rxsol-50-5003**	Boiler Cogulant	Ameroid GC	9-214 C(P)	BWT QC-3 II	Liquid Coagulant
Combotreat	**Rxsol -50-5004**	Combitreat	-	-	-	BWT one shot
Condensol Amine	**Rxsol-50-5005**	Condensole Control	-	-	-	-
Hardness Control	**RXSOL-50-5006**	Hardness Control	Adjunct-B	9-724 C	BWT QC-3 Organt	-
Oxygen Control	**RXSOL-50-5007**	Oxygen Control	Amerzine	Eliminox-9-002	-	Hydrazine

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Chemical Evaporter Treatment						
Vaptreat	RXSOL-51-6001	Vaptreat	Ameroyal	Maxi - Vap	FWC Evaport Treatment	Liquivap

Common Name	Rx Marine	Unitor	Drew Ameroid	Nalfleet	Vecom	Unimarine
Chemical For Fuel Oil Treatment						
Fuel Oil Treatment	RXSOL-70-7001	Fuel Care	F.O.T.	9-852	Sludge Conditioner	FOT
Dual Purpose Plus	Rxsol-70-7002	Dual Purpose Plus	Ameegy#5000	-	-	FOT Dual Purpose
Fuel Emulsion Breaker	RXSOL-70-7003	Gamabreak	Amerge#222	-	F.Q.T. SA	-
Dieslite	Rxsol-70-7004	Dieslite	-	-	-	FOT Catalyst
Soot Remover	RXSOL-70-7005	Soot Remover	LT-Soot Release	Soot Remover	-	Soot Stick/Soot remover

Order no:	Packing
Rxsol-1001-01	1 kg
	5 kg
	1 kg = 20 kg box
	5kg = 30 kg box

INTRODUCTION:

RXSOL-16-1001 Waterless Hand Cleaner is a white milky gel containing natural ingredients , moisturizers , surfactants powerful dispersing agent, perfume, cosmetic cleaner etc. This

is a better substitute of petroleum products & caustic based detergent which drain the body oil . It removes even the most stubborn grease and grime thoroughly yet gently. Multi-purpose heavy duty cleaning agent.

Fields of Application : Cleaning after working in Metal Industry ,Oil fields ,Chemical Ship Maintenance, Garages, Machine shops , as well as in manufacture of Engines & Transmission etc.

Directions for Use and Dose Rates :

Massaged on to the soiled / greased skin without the use of water. The skin should then either rinse with clean water or wiped thoroughly with towel / tissue paper. Because of the mildness of this product to skin, it may be used for cleaning all areas of the body, if required RXSOL-16-1001-5 easily removes the dirt no matter how deeply it is buried in the skin. Normal 2-5 grams is sufficient to apply , but depends on degree of contamination and cleaning required . In hard cleaning repetition may require.

CHARACTERISTIC

APPEARANCE : White gel / paste (at 20-30°C)
DENSITY : In g/cm3 at 20°C: 1.0
FLASH POINT : Non Flammable
SOLUBILITY : Infinite in water
COMPATIBILITY : METAL : No known effect
RUBBER : No known effect
PACKAGING : Order Size 5 kg /1 kg Box containing 6x5 kg.

Features, Benefits and Applications:

- Enriched with Moisturizers. And highly effective general purpose degreaser / cleaner
- Pleasant Citrus / Jasmine/ Orange smell.
- Easier to disperse than many other Gel cleaners
- It is non-toxic which makes handling easy.

FIRST AID MEASURES Harmful, if ingested, induce vomiting and seek medical attention.

CONDITION TO AVOID: Heat, Direct sun rays.

MATERIALS TO AVOID: Do not subject to Acidic / Alkaline /Moisture/Oxidizing Agent etc.

Order no:	Packing
Rxsol-12-1501	20 Ltr.
	25 Ltr.
	210 Ltr.

All Purpose Cleaner

The Importance of RXSOL-12-1501 by High-Pressure Cleaning The job of high pressure cleaning can be done easier & quicker by simply using RXSOL-12-1501 in correct dosages. Using a high pressure cleaner alone, without any CLEANER, will not achieve optimal cleaning results High-pressure cleaning primarily refers to cleaning of Hard surfaces, such as Decks, Tanks, Engine-rooms, etc. and in the majority of cases the cleaning is done according to the so-called two-step method:

Step 1 : Spraying the RXSOL-12-1501 over the area to be cleaned.

Step 2 : Washing down the area using a high-pressure water jet After the RXSOL-12-1501 has been sprayed on the surface and before

The wash down begins, the chemicals penetrates & thoroughly moistens dirt & other grime. During wash down, the RXSOL-12-1501 thoroughly dissolves the particles of dirt, even oil and fat, in the water spray and thus achieves optimal cleaning results. In addition to being more effective, the use of RXSOL-12-1501 substantially reduces the time required for the Cle - aning operation, as well as preventing dirt from reforming on the surface. The use of RXSOL-12-1501 in correct dosages is half the job done. 3 Pieces of Good Advice Apply RXSOL-12-1501 on dry surface where possible!

A dry surface will absorb far better than a wet surface. When applying RXSOL-12-1501 on vertical surfaces: Start application from the bottom and work upwards! If beginning from the top and going downwards, the RXSOL-12-1501 may produce "channels" down the surface, thereby running too fast off the surface. During high pressure cleaning: It is important that the rinsing water does not run over non-cleaned surfaces! The rinsing water can draw soap from the surface if running over non-cleaned surfaces. High pressure together with optimum concentration of RXSOL-12-1501 will give the best effect.

Product Description: RXSOL-12-1501 is a superior & powerful alkaline cleaner containing corrosion inhibitors to prevents the corrosion of metals. It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents ,Biodegradable and minimizes the extreme hazards to personnel in handling materials Applications RXSOL-12-1501 Suitable for cleaning engine components like fuel and Lube oil filters, Injection nozzles, pump components,

inlet and exhaust valves & primarily refers to cleaning of hard surfaces, such as

Decks , Tanks ,Engine-rooms ,etc .can be used for all types of cleaning and degreasing and may be applied by brush, hand spray , high and low pressure washing

machines etc. Directions for Use and Dose Rates General Cleaning RXSOL-12-1501 can be used for all types of cleaning & degreasing & may be applied by Brush, Hand spray, high and low pressure washing machines etc .Time necessary for cleaning depends on the nature and thickness of the deposits.20-30 min. will suffice for most applications. Hardened , carbonized or aged deposits may require up to 4 hours. If the cleaning solution is not heavily contaminated, it may be re-used at a later stage. If allowed to cool, the degassing procedure must be repeated. Depending on degree of contamination

RXSOL-12-1501 should be mixed with warm water at a rate of 50-200 ml per 10 litres.i.e.1cup of RXSOL-12-1501 to a bucket of water. RXSOL-12-1501 solution can be applied simply by mops, brushes or rags, or by dipping the soiled articles into the RxRXSOL-15-1501-tech solution. After cleaning, rinse off with cold or warm water.

Due to high foaming properties,RXSOL-12-1501 is not recommended for washing machines. Tank Cleaning Cargo tank cleaning to remove

Residues of Mineral, Animal, Vegetable or Fish oil, Waxes & Soot from inert gas systems

Method of Application and Dose Rates:

1. 1. Direct injection method for tank washing machines. Dose rate 1-5 liters per ton wash water (0.1-0.5%).
2. Recirculation method. Dose rate 1-7 liters per ton wash water (0.1-0.7%).
3. 3 Spot cleaning. Hand spray neat or diluted with up
4. to
5. Five parts water and leave for several minutes before rinsing off with clean water. Cleaning of Cargo Tanks to remove Soot from Inert Gas Systems.
6. Spray RXSOL-12-1501 on with a high pressure cleaning machine and use1:6 with water. If used with hand sprayer, spray the product neat onto the surface,allowing1 lit. for every12 m2.Use a5-8%solution in a tank washing machine.
7. Leave for about 30-45 minutes. The surface should be kept wet.
8. Wash down with hot water (80°C) and check the cargo tank
9. Repeat the procedure if necessary.

Note: Whenever possible, the cleaning solution should be heated to 60-80°C.If this method is not possible, other conventional methods such as separate rate direct injection, recirculation or hand spraying provide acceptable options. For boiler fire side cleaning, a 10-20 % hot solution, (temp .above 40°C),should be sprayed on to the surfaces to be cleaned. Allow to penetrate for 20 minutes and flush off. For deposits which are very hard to remove, increase the concentration to 50% and repeat if necessary

Appearance	**Pale yellow liquid**	
Density	In g/cm3 at 15°C: 1.01	
Compatibility Metal	No known effect	
Rubber	No known effect	
pH	Alkaline	
PACKAGING	RXSOL-12-1501-AP	Size (in Liters) 25, 35

Characteristics:

Removes grease, oil, carbon deposits, soil and grime.

- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic.
- Biodegradable.
- Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use
- Water-based cleaner.
- RXSOL-12-1501 has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals.
- Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.
- Leaves surfaces residue free. Page 2 of 3 : 3 :
- Acceptable for use in food areas.
- Suitable for accommodation cleaning of woodwork, leather, desks, etc.
- Suitable for cleaning of toilets and showers.
- Suitable for cleaning of reefer boxes.
- Can be used for cleaning of windows and portholes.
- Can be used for cleaning of dishes.
- Can be used for cleaning of hospitals.
- Can be used for hand laundry cleaning.

Order no:	Packing
Rxsol-16-0009	25 Ltr.
	210 Ltr.

Air Cooler Cleaner
Cleaner for Air Coolers and Turbo

Product Description: RXSOL-16-0009 is a concentrate solvent emulsion cleaner for cleaning of Air coolers, Scavenging air systems and turbochargers of diesel engine.

Procedure of Use: In-service cleaning–RXSOL-16-0009 is passes through the air trucking upstream of the charge air cooler, followed by a clean water rinse. For cleaning of air coolers, it is necessary to use correctly installed dosing and injection system.

Dose : 3 to 5 liters of cleaning solution per square meter or as table below:

Engine HP.	Solution of 10 to 25% RXSOL-16-0009-020
6,000 to 12,000	2 to 3 liter
12,000 to 24,000	4 to 5 liter
24,000 or more	6 liter

Note: For cleaning of Air cooler and Air side of turbochargers, a solution of 5 - 25% RXSOL-16-0009in fresh water is recommended. Inject the solution for 10-15minutes, then similar quantity of fresh water injected to rinse off emulsified deposits.

Hand spray cleaning: By Hand spray, apply concentrate RXSOL-16-0009 all over the cooler coils. for good emulsification-on &penetration. Allow the RXSOL-16-0009 for a minimum of 1 hour, then use a high pressure water to wash off the loosened deposits. During process always keep drain valve open. After satisfactory cleaning, and flushing through with fresh water, close air cooler drains. Note that during this process the engine must be stopped.

Soak method: Machine parts with stubborn carbon deposits to be cleaned are dipped into conc. Soln. of ACC then allow deposits to. Be broken down and loosened before removal, then rinse.

Characteristics:-

. Formulated to remove oil, grease & carbon deposits from air coolers & scavenging system

. Efficient and economical.

. May be used for in-service cleaning.

. Renders surfaces oil-repellent.

. Maintains and stabilizes air cooler efficiency at maximum.

. Saves time, maintenance costs and avoids risks of damage when dismantling.

. Leaves no residue and has no harmful effect on engine.

. Product in water solution is non-flammable, non-explosive and has no flash point.

. Can be used for light carbon removal from machinery parts

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-16-1049	20 Ltr
	25 Ltr.
	210 Ltr.

Air Cooler Cleaner Lt

Cleaner for Air Coolers and Turbo

Product Description :

RXSOL-16-1049 is a concentrate solvent emulsion cleaner for cleaning of Air coolers, Scavenging air systems and turbochargers of diesel engine.

PROCEDURE OF USE :

In-service cleaning

RXSOL-16-1049 is passes through the air trucking upstream of the charge air cooler, followed by a clean water rinse. For cleaning of air coolers, it is necessary to use correctly installed dosing and injection system.

DOSE :

3 to 5 liters of cleaning solution per square meter or as table below:

Engine HP.	Solution of 10 to 25% RXSOL-16-1049
6,000 to 12,000	2 to 3 liter
12,000 to 24,000	4 to 5 liter
24,000 or more	6 liter

NOTE :

For cleaning of Air cooler and Air side of turbochargers, a solution of 5 - 25% RXSOL-16-0009-ACC in fresh water is recommended. Inject the solution for **10-15**minutes, then similar quantity of fresh water injected to rinse off emulsified deposits.

Hand sprays Cleaning:-

By Hand spray, apply concentrate RXSOL-16-1049 all over the cooler coils. for good emulsification & penetration. Allow the RXSOL-16-1049 for a minimum of 1 hour, then use a high pressure water to wash off the loosened deposits. During process

Always keep drain valve open. After satisfactory cleaning, and flushing through with fresh water, close air cooler drains. Note that during this process the engine must be stopped.

Soak method:

Machine parts with stubborn carbon deposits to be cleaned is dipped into conc. Soln. of ACC then allow deposits to. Be broken down and loosened before removal, then rinse .

Characteristics:

- Formulated to remove oil, grease & carbon deposits from air coolers & scavenging system
- Efficient and economical.
- May be used for in-service cleaning.
- Renders surfaces oil-repellent.
- Maintains and stabilizes air cooler efficiency at maximum.
- Saves time, maintenance costs and avoids risks of damage when dismantling.
- Leaves no residue and has no harmful effect on engine.
- Product in water solution is non-flammable, non-explosive and has no flash point.
- Can be used for light carbon removal from machinery parts

****Read the Material Safety Data Sheet before using this product***

Order no:	Packing
Rxsol-16-1040	25 Ltr.
	210 Ltr.

Air Cooler Cleaner Alkaline

Cleaner for Air Coolers and Turbo

Product Description:-

RXSOL-16-1040 Rx is a concentrate solvent emulsion cleaner for cleaning of Air coolers, Scavenging air systems and turbochargers of diesel engine.

Procedure Of Use:-

In-service cleaning:- RXSOL-16-1040 Rx is passes through the air trucking upstream of the charge air cooler, followed by a clean water rinse. For cleaning of air coolers, it is necessary to use correctly installed dosing and injection system.

Dose:-

3 to 5 liters of cleaning solution per square meter or as table below:

Engine HP.	Solution of 10 to 25% RXSOL ACC 009 Rx
6,000 to 12,000	2 to 3 liter
12,000 to 24,000	4 to 5 liter
24,000 or more	6 liter

Note:-

For cleaning of Air cooler and Air side of turbochargers, a solution of 5 - 25% RXSOL-16-1040 Rx in fresh water is recommended. Inject the solution for 10-15minutes, then similar quantity of fresh water injected to rinse off emulsified deposits.

Hands spray Cleaning:-

By Hand spray, apply concentrate RXSOL-16-1040 Rx all over the cooler coils. for good

emulsifications & penetration. Allow the RXSOL-16-1040 Rx for a minimum of 1 hour, then use a high pressure water to wash off the loosened deposits. During process always keep drain valve open. After satisfactory cleaning, and flushing through with fresh water, close air cooler drains. Note that during this process the engine must be stopped.

Soak method:-

Machine parts with stubborn carbon deposits to be cleaned is dipped into conc. Soln. of ACC then allow deposits to. Be broken down and loosened before removal, then rinse .

Characteristics:-

Formulated to remove oil, grease & carbon deposits from air coolers & scavenging system Efficient and economical.

May be used for in-service cleaning. Renders surfaces oil-repellent.

Maintains and stabilizes air cooler efficiency at maximum.

Saves time, maintenance costs and avoids risks of damage when dismantling.

Leaves no residue and has no harmful effect on engine. Product in water solution is non-flammable, non-explosive and has no flash point.

Can be used for light carbon removal from machinery parts

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-10-1002	25 Ltr.
	210 Ltr.

Neutralizer: Rxsol Bilge Coat is an alkaline solution for the bilge lines and wells during sulphur voyages. It acts as a neutralizing agent for the collection of acidic bilge water. Rxsol Bilge Coat is easier to use and safer than dealing with caustic soda flakes. Two Liters of Rxsol Bilge Coat Concentrate, when mixed with water, makes 100 Ltr of Rxsol Bilge Coat Solution. Approx. 15 Ltr of Rxsol Bilge Coat Solution is then poured down the sounding pipes after each time the bilge water is pumped out.

Features & Benefits:

- Bilge protection against acidic water
- Environmentally friendly
- Comes in concentrate form for easy mixing
- Can be easily used by ship's crew
- Much safer than Caustic Soda flakes

Purpose Of Use Dilution Rate:

(Concentrate: Fresh Water)	PAILS	PER HOLD HANDYMAX	(5 Holds)	PANAMAX (7 Holds)
Acid Neutralizer 1:20 (5 ltrs:95 Ltr water)	2 Bottles	10 Bottles		14 Bottles

Mixing Instructions:

1. Use a clean empty container.
2. Pour 2 Ltr of Bilge Coat concentrate.
3. Add 95 Ltr of fresh water with 5 Ltr Rxsol Bilge Coat to make Rxsol Bilge Coat Solutions

Instructions for Use:

1. Pour 15 to 20 Ltr of Rxsol Bilge Coat Solution directly into each hold sounding pipe, from on deck.
2. Replenish each time after the bilge water is pumped out

Order no: **Packing**

Rxsol- RXSOL-10-1003 **25 Ltr.**

210 Ltr.

CARBON REMOVER

Product Description:

RXSOL-16-1003**"** is a unique formulation of Wetting Emulsifying Agent along with powerful surfactants and organic solvents. It does not contain any chlorinated solvents of Phenols & has less than 10% Aromatics & surfactants in the product do not contain any alkyl phenol ethoxylates.

Product Uses:

1.RXSOL-16-1003 is a fully active cleaner specially formulated for the removal of "CARBON"& tuff oily stains residues.

2.CARBON cleaning is active with out the need for Scrubbing or Brushing which can cause mechanical damages to discs and result in poor performance. 3.Field test have shown that RXSOL-16-1003 is very gentle with personnel and on metallic color surface.

RXSOL-16-1003 should always be used at full strength to obtain maximum benefits.

Product-Application:

Directions for Use and Dose Rates

Soak Method:

The apparatus/parts for cleaning are dipped through the RXSOL-16-1003.Immersion time will depend up on the nature of the deposited particle.. The components should be rinsed thoroughly before handling.

Dose:

Either concentrate or dilute 1 part concentrate to 2-5 part water to yield a very effective end product then components and machine parts are dipped into the solvent / solution for 30 min. to 1-hour while for heavy deposition may need 12-24 hour**.**

Note :

Low evaporation prevents loss of chemical

Cleaning of Heat Exchangers(oil part)
1.Drain the system off any remaining oil.
2.Arrange the system for re circulation with active RXSOL-16-
1003

3.Heat the Soln. up to 50º.If heating is not available, the cleaning time will need to be extended.

4. Circulate for 12-15 hours. When the cleaning is complete drain the system.

5. Connect high pressure fresh water supply to the upper heat exchanger connection. Rinse until water runs clear
6. Disconnect, drain and dry the system.

Note:

Cleaning time will vary depending on the extract nature and thickness of deposit to be removal.
Stubborn deposits should be scrubbed to assist the cleaning operation
Your local Rx Cleansers representative will work with you to design the optimum concentration &procedure for your system.

Safety And Handling :

RXSOL-16-1003 " is completely safe to handle, being non-toxic & non corrosive. As with all chemicals general safety and handling procedures apply. Avoid contact with eyes as irritation may occur. Do not take internally. In case of contact with eyes, flush eyes

immediately and copiously with clean running water for 15- minutes and seek medical attention.

Product Properties:-

Product Name	RXSOL-16-1003	
Active Mater	93-98%	
Consistency	Liquid	
Emulsifying Property	Good for emulsification of Oils , Gum , Wax, Greases , Polymer & Solvents , TETRA CHLOROETHYLENE (PC)	
Wetting Property	Good Wetting & Emulsifying Property	
Color	Pale Yellow	
Appearance	Clear liquid	
Odor	Pine based	
MOISTURE	0.5 % (max)	
DENSITY	In g/cm3 at 15°C: 1.06	
FLASH POINT	(PMCC)°C: Above 80	
COMPATIBILITY		
Metal	No known effect	
Rubber	May swell	
Synthetic rubber	May swell	
PACKAGING	Order No	Size (in liters)
	RXSOL-16-1003-020	5,25

. Dries Completely.

. Does not require special feeding equipment for safe application.

. Reduce downtime and maintenance costs

Characteristics : (RXSOL-16-1003)

. Unique chemical formulation

. Non- toxic

. Extends time between cleans.

. Safe to handle

. Effective removal of STICKER/CARBON DEPOSITS.

. Can be applied by all normal methods.

. Formulated to be very cost effective.

. Does not contain chlorinated hydrocarbons.

. Can be used on all metals & most painted surfaces.

. Environmentally friendly.

. Non-Corrosive.

. 93-98% Active.

Order no:	Packing
Rxsol-20-1603	20 Ltr.
	25 Ltr.

Low Toxic Solvent Cleaner for Removal of

Stubborn Carbon Deposits

Product Description

Carbon Remover LT is a non-corrosive, powerful solvent for removal of carbonaceous deposits. Carbon Remover LT contains no chlorinated solvents or phenolic compounds and has low toxicity to the environment and to persons handling it.

Directions for Use and Dose Rates

Submerged Method

This is an effective way of cleaning deposits from machine parts. The items to be cleaned are dipped into the solvent. A wire basket can be used for small components. For removal of light deposits or oil, a dilution of up to 1:2 in fresh water can be used. Light deposits will be removed in 1 hour, whereas heavily oxidized deposits may need overnight soaking. After the components have been removed from the soaking bath, remaining solvent is easily flushed off with water. Due to a very low evaporation rate, no precautions are necessary to prevent loss of liquid, but adequate ventilation is recommended. Cleaning the Oil Side of Heat Exchangers Where in-situ cleaning is required, Carbon Remover LT can be used neat and circulated through the unit in question. Time required for this process will again depend on extent of fouling and may take up to 24 hours. recommended to be used.

- Disconnect the heat exchanger's oil inlet and outlet, drain off any remaining oil.
- Connect the discharge side of the Chemical Cleaning Unit (CCU) to the lower heat exchanger connection and fit the return to the CCU.
- Add Carbon Remover LT LT to the drum and heat, maintaining the temperature (max 60°C), throughout the cleaning operation. If heat is not available the cleaning time will need to be extended.
- Circulate for 12 hours. When the cleaning is complete, disconnect the lower heat exchange connection and

Product Properties

APPEARANCE	**Pale yellow liquid**
DENSITY, in g/cm3 at 15°C	1.0
FLASH POINT, (PMCC) in °C	Above 61
pH, in conc.	N/A
COMPATIBILITY	
Metal	No known effect
Rubber	May swell
Synthetic rubber	May swell

Features, Benefits and Applications

- Reformulated with improved cleaning properties
- Can be used for cleaning engine parts like:
  - Pistons
  - Piston rings
  - Valves
  - Valve cages
- Does not contain nonyl phenol ethoxylates or other
- estrogenic compounds Non-corrosive, safe on all light metals, including aluminum
- Quickly dissolves deposits containing carbon, resins or varnishes
- Simple and economical to use by soaking or circulation method
- Low toxicity
- Low evaporation rate
- No phenolic or chlorinated compounds
- Can be used for removal of carbon type deposits from
- burner tips, fuel injectors and all components fouled by

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol- RXSOL-10-1005 **25 Ltr.**

210 Ltr.

HEAVY DUTY DEGREASER (Oil- Grease- Remover)

Introduction:

RXSOL-10-1005 is a unique formulation blended from inorganic, organic Compound and solvent with powerful dispersing agent .Readily soluble in water in all proportions.RXSOL-10-1005 is non- corrosive to metal like copper, aluminum, Mild steel, and plastic. It is non toxic which makes handling easy. Functions Complete removal of dirt, oil, carbonized grease, heavy oil, gum , vegetable oil , Lube oil, soot , asphalt , carbon stains etc. Gives clear finish to the surface.

Procedure Of Use:

1st Method : Mix 1 part of RXSOL-10-1005 with 2 -10 parts of water / GAS-OIL , For heavy oil, greasy surface use directly)Spray directly on the entire surface to be cleaned. This can be achieved by Hand spray/mechanical spray pump.

Immediately after 2 -5 minute of spray the RXSOL-10-1005 starts its function. The Dirt, oil grease etc will loosen. 5 to 6 minutes after spraying start rinsing the system with water (High pressure recommended). Dirt and mud starts vanishing with cleaning media and water.

2nd Method: Application in immersion process with or without ultrasonic support, manual wiping.

3rd Method: RXSOL-10-1005 is also used in conjunction with alkaline degreasing bath at 3-5% (v/v) concentration for better and quick degreasing action. Either's the bath is heated to be 70c or the solution can be stirred or air agitated.

Product Properties :

APPEARANCE	**Clear brown liquid**	
DENSITY	In g/cm3 at 15°C	
FLASH POINT	°C Above 65	
COMPATIBILITY		
Metal	No known effect	
Rubber	May swell	
Synthetic rubber	May swell	
PACKAGING	Order No: RXSOL-10-1005	Size (in liters) 25 / 30 / 21

Advantages: RXSOL-10-1005 is easily soluble in water Action is quite fast even at low temperature which gives advantages of cleaning under operation And avoid shut down and down time. Non corrosive to most of the metals / plastics. Gives clear finish to the surface.

Lower cost due to high concentration Fields of

Application:

Treated for the really tough daily cleaning problems faced in the proper Maintenance of Industrial and Institutional physical plants. Can be used as a stripper for all types of waxes and finishes and as a Degreaser where regular cleaners will not perform. May be brushed on , sprayed or used in a dip tank . Excellent for use as a wash for fuel tankers & as a liquid steam jenny compound.

Caution : Although RXSOL-10-1005 is non toxic &non irritant avoid skin or eye. Contact. If contact occurs wash with ample quantity of water

Order no:	Packing
Rxsol- RXSOL-10-1006	20 Ltr.
	25 Ltr.
	210 Ltr.

Water-Based Degreaser for general purpose RXSOL-10-1006

Product Introduction: RXSOL-10-1006 Mixture of Emulsifier, new technology surfactants (With high solvency and emulsification effect), Corrosion inhibitors, Rust preventive. due to free from caustic and Hydrocarbon very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas .

Acts as superior quality cleaner / degreaser.BIO DEGRADABLE

Fields: RXSOL-10-1006 containing corrosion inhibitors to prevents the corrosion of metals such as Aluminum, Copper, Brass and Tin.RXSOL-10-1006 is designed to clean Animal / Vegetables oils, Fats, Hydrocarbon removes Dirt, Link, Carbonized grease, Oil, Heavy oils etc. Specialized for all types of cleaning and degreasing. May be applied by brush , hand spray or used in ultrasonic cleaning tanks, immersion soak tanks and high and low pressure spray appliances. May be used neat or diluted by up to 50 parts of water according to the amount and type of soil to be removed.

Tank Cleaning (Cargo tank cleaning after mineral, animal, vegetable and fish oil.)

Method of Application and Doses: 1st of all by stripping suction removes all possible oil (greasy materials)To prevents evaporation of lighter fraction oil flush the system with cold water. May be brushed on, sprayed (Hand spray /Direct injection) recalculate the system with RXSOL-10-1006 Solution.

1.Cleaning with washing machines. Dose rate: 0.3-5 Ltr per ton wash water (0.03-0.5%)

2.Cleaning with recirculation method.

Dose rate: 0.5-10 Ltr per ton wash water, (0.05-1%).
3.Spot cleaning. Hand sprayed neat or diluted up to1-10 parts water and left for about 15-20 minutes before washing. Off

Dosage:

Nature Of Residue **Veg. Oil (Drying/Non Drying Fish Oil ,Alcohol ,Acids ,Amines)**	**DIRECT INJECTION 0.03-0.5%**	**CIRCULATION 0.05-0.7 %**
ORGANIC MATERIAL (HYDROCARBON)	0.0 5-0.5%	0.05-0.7%

Product Properties:

Appearance	**Compatible with oily water separators.**		
Odor / Solubility	Releasing the oil phase for reclamation. Suitable for all types of floors. Deodorizing nature		
Density	Eliminates the need to buy & stock duplicate products because of its effectiveness.		
Compatibility	An economic highly concentrated product.		
Metal Rubber	Also used for gas and hydrocarbon freeing of tanks. Free from caustic & hydrocarbon ,Non flammable Water based , Biodegradable .Safe to metal		
pH Neat	12	RXSOL-10-1006 SB-Packaging	Size In Ltr.20,35,210

RXSOL-10-1006 has numerous general cleaning applications including the removal of greases, oil, sludge, carbon deposits, general dirt and grime. Can be used as engine room cleaner. Suitable for cargo tank cleaning. Can be used as accommodation cleaner for bulkheads, decks, toilets. Suitable for cleaning of soiled textiles as rugs, covers, mats, overalls, etc. Effectively cleans glass fiber boats, hulls and painted surface

Order no:	Packing
Rxsol- RXSOL-16-1007	25 Ltr.
	210 Ltr.

Disc Cleaner-I (RXSOL-16-1007)

INTRODUCTION:-

RXSOL-16-1007 is a liquid blend of organic solvent with heavy duty & concentrated emulsifying agents. An extremely effective for removal of burnt grease, carbon deposit, oily residues and lacquers found in fuel oil and lube oil purifiers and filters

FIELDS:-

A very fast & effectively removes without the need of Scrubbing and Brushing of Centrifugal Separators, Disc & all types of heavy tenacious deposits which collect in fuel & lube oils centrifugal separators disc stacks.
NOTE:- Mechanical cleaning (Scrubbing and Brushing) damage to discs which results in poor performance.

Procedure:-

Should be diluted, at the rate of 1-parts **RXSOL-16-1007** to 5-parts water,(Or 1:1 ratio of any solvent like diesel) before use or depend on nature of dirt / contamination **RXSOL-16-1007** may be used directly.

At 50 to 60°C for best result apply higher concentration for 15 min. to 3 hours.

After the unit or parts have been satisfactorily cleaned, they should be rinsed thoroughly with fresh water. It is recommended that this product is not used on soft metal, Zinc, Tin, Galvanized surfaces or Anodized Aluminum.

NOTE: -

Recirculation and heating will improves the cleaning action.

Characteristics:-

• Formulated to remove heavy tenacious deposits.

• Allows cleaning of discs without dismantling of disc stacks.

• Reduces downtime.

• Improves efficiency of centrifuge installation.

• Cleans down to metal surfaces.

• Cleans all types of separator discs

****Read the Material Safety Data Sheet before using this product****

Descalex/Safe Acid Powder 1.12

Order no: **Packing**

Rxsol- RXSOL-15-1008 **25 Kg**

Powder Acid for Removal of Scale and Rust Descalex-RXSOL-15-1008

Product Description:-

Descalex is a dry acid cleaner formulated to remove rust and scale deposits.

Directions for Use and Dose Rates:-

The most effective Descaling is accomplished by circulation. In the case of small components, the soak method in an immersion bath can be used. If the equipment to be cleaned is contaminated by oil, grease and sludge, then pre-cleaning with Sea clean Plus or Enviro clean. Depending on the extent of scaling, use a solution of 2.5-10% Descalex. The solution will have a red color which disappears when the solution is neutralized. Whenever possible, the solution should be heated to 60°C. Neutralized solutions can be reactivated by adding more Descalex until the red color reappears. This should not be done more than twice. Descalex should not be used on aluminum, zinc, tin or galvanized surfaces. Descaling of Boilers, Descaling of Diesel Engine Cooling Water Systems, Condensers,

Evaporators, Clarifiers, Heat Exchangers:-

The strength of the acid can be enhanced by adding 1 part sodium chloride (common salt) to 20 parts of Descalex. This enhancement of the cleaning solution, however, should not be used when descaling diesel engine cooling water systems. After use of Descalex a 0.5% solution of Alkalinity Control in fresh water should be used for neutralization.

Product Properties:-

Appearance	**Yellowish powder**
Density	in g/cm3 at 15°C: 1.2
Flash Point	(PMCC) in °C: N/A
pH	in 10 wt-%: 1.1
Compatibility	
Metal	Avoid aluminum, zinc, tin and their alloys and galvanized surfaces.
Rubber	No known effect.

Features, Benefits and Applications:-

• Dry acid cleaner contains inhibitors to protect metals.
• Contains color indicator to show the strength of the solution and anti-foam agent.
• Safe and easy handling and storage.

• Fast and effective scale remover.

• Removes scale from boilers.

• Removes scale from diesel engine cooling water systems.
• Removes scale and rust from condensers, evaporators, heat exchangers etc.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol- RXSOL-11-1008	20 Ltr.
	25 Ltr.

Descaling Liquid-Rx(RXSOL-11-1008)

Liquid Acid for Removal of Scale and rust deposit Product Description: special grade cleaner also compatible on Aluminum, Zinc, Tin, or any Galvanized Surfaces RXSOL-11-1008 is a liquid superior, heavy duty, concentrated acid solution containing accelerators, corrosion-inhibitors & wetting agents. Specifically formulated to remove rust and water scale build-up from boilers, evaporators, heat exchangers, cooling systems, pipeline collection systems etc. Very effective results when is applied.

Fields: Boilers ,clarifiers ,heat exchangers ,diesel engine cooling system ,condensers ,evaporators ,& other types of equipment where rust & scale forms and very compatible with soft metals.

Directions for Use and Dose Rates: The most effective method is circulation for large systems or components like boilers, evaporators, condensers, heat exchangers and generally closed systems that have the capability to circulate at a temperature of approximately 40-60°C, for 6-12 hours and solutions of 10-40% of RXSOL-11-1008 in water. Keep in mind that the strength of the solution is analogous to the degree of deposition of scale. In case of small components, the soak method in an immersion bath can be used. If the equipment to be cleaned is contaminated by oil, grease, sludge or carbonized oil, then first of all clean the system with degreaser RXSOL OB 1005.

RXSOL-11-1008 should be mixed with fresh water to form a solution of 10-30%, depending on the extent of scaling. After using RXSOL-11-1008 it is essential to thoroughly rinse all metal surfaces at least once with a 0.5% solution of Alkalinity Control in fresh water. This solution should be circulated for 2-4 hours or until an acceptable pH value is obtained. This will neutralize any remaining acidity & passivity steel surfaces.

Chemical Cleaning Module: Rx cleansers has developed a 280 liters capacity cleaning module, primarily designed for use with chemical acid solvents

For Descaling boilers, clarifiers, heat exchangers & other types of equipment where rust & scale forms.

See Rx cleansers Practical Application Manual:

Product Properties:-

Appearance	**Clear liquid**	
Density	In g/cm3 at 15°C: 1.2	
pH	(Neat) <1.5	
Compatibility		
Metal	Contains corrosion inhibitor	
Rubber	No known effect	
Synthetic Rubber	May swell	
Packaging	Order No.: RXSOL-11-1008	Size(liters) 25 , 35

Characteristics:

. Fast and effective scale remover

. Very soft on ferrous metals.

. Removes water scale & rust from boilers/diesel engine & other cooling system .As well as from condensers, evaporators, & heat exchangers etc

Order no: **Packing**

Rxsol- RXSOL-16-1009 **20 Ltr.**

25 Ltr.

Excellent Cleaner for Electric Parts

ELECTROSOL Plus Kgs(RXSOL-16-1009)

Introduction :

A well balanced blend of non-chlorinated degreaser (Having super Degreasing power) with surfactants which eliminates Quick evaporation rate and resulting for Cleaning and Degreasing of electrical equipment. It provides immediate and efficient removal with a high evaporation rate.

Procedure of Use:

RXSOL-16-1009 must be used in open or sufficiently ventilated areas. RXSOL-16-1009-Kshould always be used concentrate (without mixing with other solvent.) For best results apply with either by brush, swab, or as a fine spray using suitable hand held spray equipment. Small components may be cleaned by brief immersion in a bath of RXSOL-16-1009-K. Never use RXSOL-16-1009-K on a running generator or motor. RXSOL-16-1009-K can be used to clean virtually all electrical equipment & components although is it possible it may affect some types of rubber & plastic .
Either remove rubber & plastic parts from component or test on small area for any reaction before cleaning.

Product Properties

Appearance	**Clear Colorless Liquid**	**Vapor Density : Heavier than air**
Flash Point	63°C (Closed Cup)	Stability : Very stable understandard,normalconditions
Compatibility		
Metal	No known effect	Note: After use the product must always be well sealed in the drum.
Plastic	No Known effect	
Rubber	May swell	
Packaging	Order No	Size (in kgs./liters.)
	RXSOL-16-1009-K	7/25 Liters

Characteristics ;

- High dissolving and penetration action.
- Excellent degreasing and emulsification power .
- Safe on applied electrical insulation.
- Non-corrosive .It is safe to use on painted or varnished metal surfaces.
- Without chlorinated solvents.
- To be used as an alternative to conventional electric cleaners

Classification:

Description	Concentration	Product no.
ELECTROSOL - PLUS	95 - 98 %	RXSOL – MC – 1009A
ELECTROSOL Q.D.(QUICK DRY)	93 - 98%	RXSOL – MC – 1009B
ELECTROSOL – Non Flammable	97 - 99 %	RXSOL – MC – 1009C

Order no:	Packing
RXSOL-16-1009	20 Ltr.
	25 Ltr.

Excellent Cleaner for Electric Parts
Electrosol QD (RXSOL-16-1009)

Introduction:-

A well balanced blend of non-chlorinated degreaser (Having super Degreasing power) with surfactants which eliminates Quick evaporation rate and resulting for Cleaning and Degreasing of electrical equipment. It provides immediate and efficient removal with a high evaporation rate.

Procedure of Use:-

RXSOL-16-1009 must be used in open or sufficiently ventilated areas.RXSOL-16-1009 should always be used concentrate (without mixing with other solvent.) For best results apply with either by brush, swab, or as a fine spray using suitable hand held spray equipment. Small components may be cleaned by brief immersion in a bath of RXSOL-16-1009. Never use RXSOL-16-1009 on a running generator or motor.RXSOL-16-1009 can be used to clean virtually all electrical equipment & components although is it possible it may affect some types of rubber & plastic.
Either remove rubber & plastic parts from component or test on small area for any reaction before cleaning.

Product Properties

Appearance	**Clear Colorless Liquid**	**Vapor Density : Heavier than air**
Flash Point	63°C (Closed Cup)	Stability : Very stable under standard, normal conditions
Compatibility		
Metal	No known effect	**Note***: After use the product must always be well sealed in the drum.*
Plastic	No known effect	
Rubber	May swell	
Packaging	Order No.:	Size (in kgs./liters.)
	RXSOL-16-1009	7/25 Liters

Characteristics

- High dissolving and penetration action.
- Excellent degreasing and emulsification power .
- Safe on applied electrical insulation.

- Non-corrosive .It is safe to use on painted or varnished metal surfaces.
- Without chlorinated solvents.
- To be used as an alternative to conventional electric cleaners

Classification:-

Description	Concentration	Product no.
Electrosol Plus	95 - 98 %	RXSOL – MC – 1009A
Electrosol QD	**93 - 98%**	**RXSOL – MC – 1009B**
ELECTROSOL – Non Flammable	**97 - 99 %**	**RXSOL – MC – 1009C**

Order no:	Packing
Rxsol- RXSOL-16-1011	25 Ltr.
	210 Ltr.

Metal Brite (RXSOL-16-1011)

Product Description:- A superior heavy duty and highly Concentrated liquid blend of surfactant & organic compound containing rust penetrating agent, solubilizer and inhibited phosphoric acid.

Field:- specially designed for removal of rust from any steel surface area and rust stain from Brass , Copper , S.S wood , ceramic and aluminum surfaces , painted or not . And act as surface brightener.

Procedure for Use:-RXSOL-16-1011 is highly concentrate

Dilute in water (always use plastic jar and RXSOL-16-1011-210 should be added to water never add water to RXSOL-16-1011.)

Surface should be sound clean and free from oil, grease, dirt etc.

Diluted materials apply on rusted area for 15 to 20 minutes then wash off with water repeat if necessary. (For stubborn rusted stains.)

Note:- For steel surfaces; remove oil, grease and old paint. Wet down entire surface with neat Metal Bright-Rx and allow to dry. Second wash may be necessary. Surface should have a grey/white appearance when the Metal Bright- Rx is dry. Steel surfaces will have a resistance to rust and will render a good base for paint. For removal of rust stains on painted surfaces and wood, Metal Bright Rx should be applied at full concentration for heavy stains, or diluted to 20-50% for light stains. Allow to soak for 15 to 30 minutes and wash off with water. A second application may be necessary to remove the stubborn stains.

Spraying Direction: – Using an empty / clean 210 liter drum, fill with 190 liter of fresh water and add 20 liters of Metal Bright Rx This makes a 10% solution, which can be sprayed onto areas in coated tanks where rust stains are showing and over actual rusted areas. Once spraying is completed, wait 20-30 minutes and fresh water rinse with lots of water, if possible use Butterworth machines for a more efficient result. This method can be used in stainless tanks to “freshen up” the look of the stainless materials. Make sure to rinse the tank very well, as residual detergent within the Metal Bright Rx will show up in a Wall Wash.

Injection– Not suitable.

Re-circulation: – When hand spraying is inadequate (too much area to cover), prepare a 2% - 5% solution in the tank using fresh water, heat solution to 50o C, then circulate the solution through Butterworth machines for

3 x 45 minutes drops minimum. When using fixed machine recalculate for a minimum of 3 cycles. Rinse out the tank using hot seawater 85o C for 2 hours making sure that there is no form remaining in the water at the pump stack drain cock. After the hot wash, the tank must be rinsed with fresh water and dried.

* If the mixture is allowed to overheat, it will soften epoxy / phenolic coating. *

Use a strainer at the pump stack when circulating any solution. Tank Lining – Stainless / Epoxy, Phenolic

Product Properties:-

Appearance	**Colorless liquid**	
Density	g/cm3 at 15°C: 1.2	
pH	10% solution 1.5-2.5	
Compatibility Metal	Concentrate and long touch may corrode.	
Rubber	No known effect	
Packaging	Order No: RXSOL MB 1011 HD	Size (in liters) 25 , 35

Characteristics:-

- Non-flammable.
- Prevents further rusting.
- Economical, cost effective.
- Surface brightening
- Protects and maintains from corrosion
- Acts as rust proofing agent before the application of paints or coatings.
- It doesn’t affect rubber and plastic compounds

Note:- When cleaning aluminum, brass & copper flush with water upon completion of cleaning

Order no:	Packing
Rxsol- RXSOL-17-1012	20 Ltr.
	25Ltr.
	210 Ltr.

Oil Spills Dispersant (RXSOL-17-1012)
Product Description:-

RXSOL-17-1012-020 Emulsifier based product with excellence efficiency and low toxicity with superior penetrating & surface active agents. This product is specially designed for complete emulsification of oil by which dispersion takes place .AREA: At SEA, at shore either in port or off board, FOR INDUSTRIAL PURPOSE.

OIL-SPILLS-AT-SEA :-

RXSOL-17-1012-020 is used concentrated by direct spraying to clean up oil spills at sea.It can be applied by hand spray, work boats with mounted spray booms , or fire hoses with injectors. Allow some time for the oil to absorb the RXSOL-17-1012-020 & then disperse mixture by vigorous agitation using Fire hoses ,Ship's propeller, Breaker boards towed behind work boats, etc .

OIL-ON-BEACHES-AND-SHORE-LINE :-

RXSOL-17-1012-020 should be applied neat by spraying over oiled areas. Allow time for the oil to absorb the DISPERSANT then follow by washing down the beach or rocks, etc. The treatment rate depends on the nature and thickness of the oil spill, also on the age and condition. Under conditions where it is a thin slick of oil, 1 liter of RXSOL-17-1012-020 WB is enough to treat approximately 20-30 Sq.M of oil. In many cases, several applications may be necessary. (Depends on the size of contamination in the affected area)

OIL-SPILL-ON-DECK :-

Remove as much of the oil as possible, then spray RXSOL-17-1012-020 over area covered by the oil & allow sometime for it to be absorbed. Disperse the mixture with water by means of a fire hose Depending on type of oil it may be necessary to use several applications.

PRODUCT PROPERTIES :-

Appearance	**Amber liquid / Low viscous**	
Odor	Aromatic	
Density	In g/cm3 at 15°C: 1.00	NOTE : SHELF LIFE 5 YEARS
Flash Point	MATERIALS BOILS AT 68°C	EFFICIENCY
Compatibility	A . SEA WATER 68%	
Metal	No known effect	B. FRESH WATER 78%
Rubber	AVOID	STABILITY
Synthetic rubber	May swell	A .SEA WATER 97.5 %
pH	7 +0.5	B . FRESH WATER 98.8 %
PACKAGING	Order No	Size (in litres)
	RXSOL-17-1012-020	25 , 30 , 210
TOXICITY LC50 (After 96 hours)	IN CONCENTRATE 4460 PPM SLIGHT TOXIC.	IN DILUTE 9800 PPM PRACTICALLY NON TOXIC

Characteristics:-

Biodegradable and having low toxicity. Self –life 5 YEARS (FROM MANUFACTURING DATE) HIGH – EMULSIFICATION rate Converts hydrocarbons particle in to very fine emulsions. Ready to use product. Suitable for Crude / Bitumen / Residual / Diesel / Kerosene, White spirit & Lube oils etc .Effective on oil spills at platform , during loading or discharging of cargo or bunkers . For cleaning of spills on Deck, Ships side, Piers, Wharfs, etc. where allowed .

Order no: **Packing**

Rxsol- RXSOL-17-1047 **25 Ltr.**

210 Ltr.

Oil Spills Dispersant (RXSOL-17-1047)

Product Description:-RXSOL-17-1047 Emulsifier based product with excellence efficiency and low toxicity with superior penetrating & surface active agents . This product is specially designed for complete emulsification of oil by which dispersion takes place . AREA: At SEA , at shore either in port or off board , for industrial purpose.

Procedure Of Use:

Oil-Spills-At-Sea:-
RXSOL-17-1047 is used concentrated by direct spraying to clean up oil spills at sea . It can be applied by hand spray, work boats with mounted spray booms , or fire hoses with injectors. Allow some time for the oil to absorb the RXSOL-17-1047 & then disperse mixture by vigorous agitation using Fire hoses , Ship's propeller, Breaker boards towed behind work boats , etc .

Oil - On - Beaches - And - Shore - Line:-
RXSOL-17-1047 should be applied neat by spraying over oiled areas. Allow time for the oil to absorb the DISPERSANT then follow by washing down the beach or rocks, etc. The treatment rate depends on the nature and thickness of the oil spill, also on the age and condition. Under conditions where it is a thin slick of oil, 1 liter of RXSOL-17-1047 is enough to treat approximately 20-30 Sq.M of oil. In many cases, several applications may be necessary. (Depends on the size of contamination in the affected area)

Oil Spill On Deck:-
Remove as much of the oil as possible, then spray RXSOL-17-1047 over area covered by the oil & allow some time for it to be absorbed. Disperse the mixture with water by means of a fire hose Depending on type of oil it may be necessary to use several applications.

Product Properties:-

Appearance	Amber liquid / Low viscous	
Odor	Sweet	
Density	In g/cm^3 at 15°C: 1.00	NOTE : SHELF LIFE 5 YEARS
Flash Point	MATERIALS BOILS AT 68°C	EFFICIENCY :
Compatibility		A. SEA WATER 68%
Metal	No known effect	B. FRESH WATER 78%
Rubber	AVOID	STABILITY :
Synthetic rubber	May swell	A .SEA WATER 97.5 %
pH	7 ±0.5	B .FRESH WATER 98.8 %
Packaging	Order No.:	Size (in liters)
	RXSOL-17-1047	25 , 30 , 210
TOXICITY LC50 (After 96 hours	IN CONCENTRATE 4460 PPM SLIGHT TOXIC.	IN DILUTE 9800 PPM PRACTICALLY NON TOXIC.

Characteristics:-

Bio-degradable and having low toxicity. Self life 5 YEARS (from mfr. date) .
HIGH Emulsification rate Converts hydrocarbons particle in to very fine emulsions. Ready to use product. Suitable for Crude / Bitumen / Residual / Diesel / Kerosene, White spirit & Lube oils etc .Effective on oil spills at platform , during loading or discharging of cargo or bunkers .For cleaning of spills on Deck, Ships side, Piers, Wharfs, etc. where allowed .

Order no:	Packing
Rxsol- RXSOL-16-1009	20 Ltr.
	25 Ltr.

RXSOL PENETROSOL (RXSOL-16-1020)

Description: –

A very strong cleaner, which can be used to soften up / remove baked on drying oils and Hard coke asphaltic deposition etc. It is low toxic product with an exceptional solvency power on soil & oily matter . It is minimizes the extreme hazards to personnel in handling materials.

USING PROCEDURE :-

The most economical method of using RXSOL PENETROSOL is by direct injection followed by recirculation washing, using tank cleaning machines.

Spraying Method :-

Using PENETROSOSL as delivered in drums, spray onto areas where residue remains following rough washing leave for 10-45 minutes (but do not allow to dry), and warm water 60oC for at least 3 hours

**Make sure to take all safety precautions are followed when handling / spraying PENETROSOSL **

Injection Method: – not applicable.

Re-circulation Method :–

If there is no drop line, then lower Butterworth hoses into the tank from the pump stack header without machines attached and circulate through these hoses while you fill the solution material.

- Use a strainer at the pump stack when circulating any solution.

SURFACE Lining – Stainless / Epoxy / Phenolic

Characteristics :-

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic., Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use , Water-based cleaner.

RXSOL PENETROSOSL has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.

- Non-corrosive to ferrous metals. Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.

NOTE: Acts as an acid-neutralizing agent

Order no:	Packing
Rxsol- RXSOL-18-1003	5 Ltr.
	25 Ltr.

PAINT-REMOVER (RXSOL-18-1013)

Introduction:- Exciting product treated for the really tough , Paints cleaning problems faced in the proper maintences of Industrials & Institutional physical plants. **Fields:-**To remove Paint, Varnish, Lacquer, Baked, Enamel, Shellac, and EPOXY in Shipping Industries, Workshop, Paints Shop, Garages from all metallic surfaces.

Note:-

This Paint–Remover (RXSOL-18-1013) particularly used in aircraft- industry because of its non-reactivity with Aluminum , Copper , Brass and their Alloys . **Composition:-** RXSOL-18-1013 is a special blend of advanced Organic corrosion protection components with various organic solvents & penetrating agents. RXSOL-18-1013 functions via a unique dual mechanism the penetrating agent reacts with paints components whilst the organic components reacts with metals to form protection film.

Applications, Dosages & Control:-

Dip-Cleaning:- Small parts maybe dipped in an open bucket or tank containing RXSOL-18-1013 removed and either wiped dry with a rag or blown dry air. Agitation will facilitate cleaning, but violent agitation such as with air should be avoided since this will increases loss of RXSOL-18-1013 evaporation. After use, the cleaning tank should be covered or the solution put into a suitable container for reuse. Solvent resistant gloves should be worn during the dip operation. **Wiping/Brushing:-**Large components may be wiped down with rags, sponges or brushes soaked in RXSOL-18-1013. Synthetics Sponges & brushes should be checked for compatibility with RXSOL-18-1013 prior to use. Adequate ventilation should be provided when this method is used & solvent resistant gloves & protection clothing should be worn.

Spray-Cleaning:-Generator & large electric motors can be cleaned effectively by the spray method any excess cleaner which runs off may be collected for re-use. A-course spray should be used to reduce evaporation And loss of RXSOL-18-1013. When this method is used adequate ventilation should be provided. If there is any danger of splashing a face shield or goggles should be worn

Advantages:-Reduced maintenances time. Does not attack Steel, Copper, Aluminum, Other alloys.

Product Properties:-

Appearance	Clear Colorless Liquid	
Density	In g/cm^3 at 20° C: @1.2	
Compatibility		
Metal	No known effect	
Rubber	May Swell	
Packaging	Order no.:	Size (in Kg)
	RXSOL-18-1013	30 / 40

Characteristics:-Easy to apply & simple to control. Exhibits excellent ;paints cleaning properties. Non toxic to the environment.100% active matter. Dries completely. Protects all common metals from corrosive attack. Reduce down time & maintenances costs. Can be used on all metals & most painted surface to remove paints.

General Remarks:-Do not store RXSOL-18-1013 near heating equipment.

First Aid & Storage:-Contact with skin can cause serious chemicals burns .Avoid contact with skin & eyes. Wear PVC gloves while handling. Do not take internally. Spl-ashes of the product or its solutions on the skin or clothing should washed immediately with copious amount of water . If the eyes are affected should be washed with water for at least 15 minutes and seek medicals attention sought immediately.

****Keep drums tightly closed when not in use****

Order no:	Packing
Rxsol- RXSOL-16-1009	20 Ltr.
	25 Ltr.

RIG WASH LIQUID(RXSOL-16-1042)

Product Introduction:

RXSOL-16-1042 Mixture of Emulsifier, new technology surfactants (With high solvency and emulsification effect), Corrosion inhibitors, Rust preventive. due to free from caustic and Hydrocarbon very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas . Acts as superior quality cleaner / degreaser. BIO DEGRADABLE

FIELDS:

RXSOL-16-1042 containing corrosion inhibitors to prevents the corrosion of metals such as Aluminum, Copper, Brass and Tin. RXSOL-16-1042 is designed to clean Animal / Vegetables oils, Fats, Hydrocarbon removes Dirt, Link, Carbonized grease, Oil, Heavy oils etc. Specialized for all types of cleaning and degreasing. May be applied by brush, hand spray or used in ultrasonic cleaning tanks, immersion soak tanks and high and low pressure spray appliances. May be used neat or diluted by up to 50 parts of water according to the amount and type of soil to be removed. Tank Cleaning (Cargo tank cleaning after mineral, animal, vegetable and fish oil.)

Method of Application and Doses :

1st of all by stripping suction removes all possible oil (greasy materials). To prevents evaporation of lighter fraction oil flush the system with cold water. May be brushed on, sprayed (Hand spray/Direct injection) recalculate the system with RXSOL-16-1042 Solution. Cleaning with washing machines. Dose rate: 0.3-5 liters per ton wash water (0.03-0.5%).

1. Cleaning with recirculation method. Dose rate: 0.5-10 liters per ton wash water (0.05-1%).

2. Spot cleaning. Hand sprayed neat or diluted up to 1-10 parts water and left for about 15-20 minutes before .washing. off

DOSAGE:

Nature Of Residue Veg. Oil (Drying/Non Drying Fish Oil, Alcohol, Acids, Amines)	HAND SPRAY 1-10%	DIRECT INJECTION 0.03-0.5%	CIRCULATION 0.05-0.7 %
Organic Material (Hydrocarbon)	NA	0.0 5-0.5%	0.05-0.7%

Product Properties:

Appearance	Pale yellow clear liquid	Compatible with oily water separators.
Odor/ Solubility	NONE / INFINITE IN WATER.	Releasing the oil phase for reclamation. Suitable for all types of floors. Deodorizing nature
Density	In g/cm3 at 15°C: 1.0 +/- 0.05	Eliminates the need to buy & stock duplicate products because of its effectiveness.
Compatibility		An economic highly concentrated product.
Metal	May attack Zinc at concentrated solutions	Also used for gas and hydrocarbon freeing of tanks. Free from caustic & hydrocarbon, Non flammable Water based , Biodegradable .Safe to metal
Rubber	No known effect	
pH Neat	7.5 to 8.5	PACKAGING: RXSOL-16-1042-25 kg, 50 kg.

RXSOL-16-1042 has numerous general cleaning applications including the removal of greases, oil, sludge, carbon deposits, general dirt and grime. Can be used as engine room cleaner. Suitable for cargo tank cleaning. Can be used as accommodation cleaner for bulkheads, decks, toilets. Suitable for cleaning of soiled textiles as rugs, covers, mats, overalls, etc. Effectively cleans glass fiber boats, hulls and painted surfaces

****Read the Material Safety Data Sheet before using this products****

Order no:	Packing
RXSOL-12-T-300	20 Ltr.
	25 Ltr.

T.POL II (RXSOL-12-T-300)

Product Description:

RXSOL-12-T-300 is a superior & powerful alkaline cleaner containing corrosion inhibitors to prevents the corrosion of metals . It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents , Biodegradable and minimizes the extreme hazards to personnel in handling materials

Applications:

RXSOL-12-T-300 Suitable for cleaning engine components like fuel and Lube oil filters, Injection nozzles, pump components, inlet and exhaust valves & primarily refers to cleaning of hard surfaces, such as Decks, Tanks, Engine rooms, etc. can be used for all types of cleaning and degreasing and may be applied by brush, hand spray, high and low pres -sure washing machines etc.

Structure :

Head-[Organic-Syndets	Molecule have a long chain non polar Hydrocarbon, whose structure can be Studied as follows
Tail-[Head	It is water soluble & '-'Very charged.
Tail	It is oil soluble.

Cleansing Action Of (RXSOL-12-T-300): When ORGANIC SYNDETS water is poured over the skin or dirty garments (Cloth)the hydrocarbon Tail of the RXSOL-12-T-300 molecules peg in to it, while the (–ve) HEAD is held in water. The dirt or grease layer is then dialoged from the skin by rubbing or from garment by tumbling and stirring. Each grease globule thus separated in PIN CUSHIONED by hydrocarbon TAILS with (-ve) HEADS out wards in water. The (-ve) HEAD globules keep apart by mutual repulsions & are said to have emulsified. The emulsified grease globules bearing dirt can be readily washed with water.

Characteristic: (Why RXSOL-12-T-300, is better than soap)

1. The "**ORGANIC SYNDET**" are superior to soaps because they do not form insoluble salts Ca^{+2},Mg^{+2}, & Fe^{+3},ions as soaps do. For e.g :- $2RCOO^{-}Na+ + Mgso4$ Ù$(RCOO)2\ Mg^{+2} + Na2So4$ Soaps Insoluble $2R\ So3^{-}Na+ + MgSo4[\ R\ So3^{-}]2Mg^{+2} + Na2So4$ ORGANIC SYNDET SOLUBLE Hence ORGANIC SYNDET ,can be used in either Soft Water or Hard Water, While ordinary soaps are precipitated in Hard Water and go waste.

2. RXSOL-12-T-300, have a long non-polar hydrocarbon chain and a highly polar group at the end of the molecule. Thus they have CLEANING POWER , as better than ORDINARY SOAP.

3. Ordinary Soaps were not readily BIODEGRADABLE, In other words, they

4. were not broken down by BACTERIA in the SEWAGE TREATMENT PLANTS. They caused water POLLUTION while RXSOL-12-T-300, are BIODEGRADABLE , so there is no question of water pollution.

Product Properties:

Appearance	Pale yellow liquid	
Density	In g/cm3 at 15°C: 1.01	
Compatibility		
Metal	No known effect	
Rubber	No known effect	
pH	Alkaline	
Packaging	RXSOL-12-T-300	Size (in Liters)
		25,35,210

Characteristics:

1. Removes grease, oil, carbon deposits, soil and grime.
2. Keeps loosened deposits in suspension preventing redeposit ion.
3. Low toxic.
4. Biodegradable.
5. Non-flammable.
6. Free from hydrocarbon solvents.
7. Effective and economical in use Water-based cleaner.
8. Non-corrosive to ferrous metals.
9. Suitable for all tank-coatings.
10. Can be used for gas and hydrocarbon freeing of tanks.
11. Can be used for deodorizing Contains wetting agents.
12. Leaves surfaces residue free.
13. Acceptable for use in food areas.
14. Suitable for accommodation cleaning of woodwork, leather, desks, etc.
15. Suitable for cleaning of toilets and showers.
16. Suitable for cleaning of reefer boxes.
17. Can be used for cleaning of windows and portholes.
18. Can be used for cleaning of dishes.
19. Can be used for cleaning of hospitals. Can be used for hand laundry cleaning

Order no:	Packing
RXSOL-16-1035	25 kg

RXSOL TURBO CLEANER DRY is blown by compressed air into the exhaust pipes before the turbocharger. This method of cleaning should be employed every 24 -48 hours of full-load operation. The interval between cleaning operations depends on the degree of contamination and on the increase in exhaust gas temperature after the turbine. Cleaning must be repeated if the gas temperature after the turbine on full load rises to 20°C (20 K) above the mean temperature. For a turbocharger with several gas inlets, the inlets should be cleaned one after the other. On engines with several turbochargers, these should be cleaned one after the other. The gas inlet temperature before the turbine must not exceed 580-590°C (853-863 K) in order to prevent severe burning of the RXSOL TURBO CLEANER DRY before the turbine. Since it is not possible to remove thick coatings with relatively small quantities of RXSOL TURBO CLEANER DRY, this method must be used more frequently. Injection of the RXSOL TURBO CLEANER DRY into the turbine is best performed at high turbocharger speed, to ensure efficient mechanical cleaning.

APPLICATIONS

Instead of water, dry solid bodies in the form of granules like RXSOL TURBO CLEANER DRY are used for cleaning. A certain quantity of them, depending on the turbocharger size, is blown by compressed air into the exhaust gas lines before the gas inlet casing On account of their hardness and composition (natural solid granules, size 1.3-1.7 mm.) RXSOL TURBO CLEANER DRY have an excellent mechanical cleaning effect (soft blast). As a rule, a turbine should be cleaned every 24 to 48 hours of operation.

INSTALLATIONS OF RXSOL Turbo Cleaner Dry CLEANING SYSTEM

1. Before each gas inlet, an adequately dimensioned pipe flange has to be selected and installed in the exhaust gas line(welded or cast eye).
2. Manufacture of containers (same number as gas inlets) as shown in the following drawing (welded assemblies).
3. Mount the fittings such as valves and the like.
4. The container has to be mounted with the strap provided for this purpose at an easily accessible location, the cock or gate
5. valve being at least 300 mm above the corresponding pipe flange in the exhaust gas line. Maximum distance between cock or gate valve and pipe flange/exhaust gas line: 1 m.
6. Arrange the compressed-air pipe to the container.

CLEANING PROCEDURES

1. For engine with several turbochargers, clean one after the other as follows:
2. Close the safety valve, tighten the valve cap. Open the cock/gate valve.
3. Open the compressed-air stop valve. Possible deposits and/or condensate in the connecting pipe are now blown out. Close the compressed-air
4. stop valve after about 3 minutes.
5. Close the cock/gate valve.
6. Open the safety valve. The exhaust gas pressure in the container is thus relieved. Close the safety valve.
7. Remove the valve cap. Fill the container with the quantity of RXSOL Turbo Cleaner Dry product specified in the table of next page.
8. Check on whether the safety valve is closed. If atall required, reduce the engine output so that the gas

9. temperature before the turbine is < 590°C (863K).
   Open the cock/gate valve.
10. Open the compressed-air stop valve. The previously filled-in RXSOL Turbo Cleaner Dry are now blown in. Close
11. the compressed-air stop valve after 1 to 1,5 minutes.
    Close the cock/gate valve.
12. Open the safety valve. The exhaust gas pressure iin the container is thus relieved. Close the safety valve.
    This procedure (item 1 to 10) has to be repeated for any further turbocharger.
13. Cleaning should then be repeated at periodical iintervals of every 24 to 50 hours of operation.

ATTENTION: It may occur that, during dry cleaning of the turbine, a small part of blown-in

RXSOL Turbo Cleaner Dry escapes through the chimney in singed condition.

GENERAL REGULATION

- The gas inlet temperature before the turbine must be not exceed 580 - 590 °C (853 - 863 K)
- The boost pressure should be over 0,5 bar
- The drain openings in the gas outlet casing must remain closed during dry cleaning
- The mean particle size of the cleaning granulate must be between 1.3 and 1.7 mm

RXSOL Turbo Cleaner Dry is produced from hard shells of fruit stones that have been stabilized by drying and degreasing. Ligneous residues and foreign matter such as mineral or metallic particles are eliminated. RXSOL Turbo Cleaner Dry is the result of many years of practical experience in blending the raw material to achieve a highly homogeneous and efficient product. No chemicals are used in our production process.

The raw materials are only treated mechanically. Hence the use of RXSOL Turbo Cleaner Dry is perfectly safe and harmless. RXSOL Turbo Cleaner Dry is now produced with improved particle size tolerance of Ø 1,3 to Ø 1,7 mm.

CONTAINER		Ø D	H
Size	Volume		
I	Ca. 1 dm^3	Ca. 100 mm	Ca. 130 mm
II	Ca. 3 dm^3	Ca. 150 mm	Ca. 170 mm
III	Ca. 5 dm^3	Ca. 180 mm	Ca. 200 mm

Order no:	Packing
RXSOL-20-2001	20 Ltr.
	25 Ltr.

Tank Cleaner and Degreaser
RXSOL-20-2001 (HEAVY DUTY - PLUS)
Introduction (Solvent based oil and grease remover) Highly concentrated solvent emulsifier, with powerful penetrating agent corrosion inhibitor and surfactants, RXSOL TC 2001 is used as a tank cleaner or for general degreasing , cleaning and gas freeing for double bottom tanks, wing tanks, tank lines, fuel oil tanks, etc . Tank Lining – Stainless/Zinc/Epoxy/Phenolic.

Using-Procedure:

Spraying:–
This can be beneficial as part of the initial cleaning process after the carriage of Lube oils and Lube oil additives. As soon as the tank in question has been checked empty by the attending surveyor, RXSOL-20-2001 Plus should be sprayed over all surfaces which are safely reachable.

Portable machines:–
After 45 minutes the Butterworth machines should be operated for 3 x 20 minutes drops using warm 60o C, then the machines brought back to the top and a full hot wash 80 – 85 o C should be carried out for at least 6 hours.
Fixed machines:–
Wash ambient for 45 minutes followed by warm water for one cycle before increasing to hot (80oC) for 4 hours.
Injection:–
This can be carried out by injecting RXSOL-20-2001 Plus into the Butterworth system after the heater. A normal amount to use would be 100 – 150 liters during the initial washing cycle. Water temperature should be 60o C during the injection period then brought up to 80 – 85 o C for the full washing period.
Re-circulation:–
Possibly the best result are achieved by re-circulating a solution of RXSOL-20-2001 Plus after the initial rough washing of the tank. A sufficient amount of fresh water to maintain good suction should be heated to 60 o C and approximately 420 liters of RXSOL-20-2001 Plus (2 drums) added for each 500 liters of fresh water. The temperature of the mixture can be increased depending upon the melting point if the product being cleaned. The solution should be circulated for at least 4 hours and the Butterworth machines operated at maximum pressure in all areas of
the tank throughout this process. If a number of tanks are to be circulated, then a substantial quantity of solution can be made so that transfers can be made without delay and any small amounts lost will not affect the operation. Normally following transfer to another tank, 100 liters RXSOL-20-2001 Plus is added for each 5000 liters of solution. This is called “spiking

Following the re-circulation process, the tank must be hot butter worsted 80-85o C for at least 6 hours.

*Use a strainer at the pump stack when circulating any solution
RXSOL-20-2001 is recommended for local cleaning and degreasing and may be applied by brush, hand spray, immersion, soaking or any other conventional means. Apply concentrate RXSOL-20-2001 over soiled area and wait for 20-30 minutes before rinsing off with water.

Soak Method:-
For heavy oil and soil Put parts to be cleaned into a bath of concentrate RXSOL-20-2001 and for medium to light soiling use a solution of 10-30% RXSOL-20-2001 in water. Parts should be soaked for at least 30 minutes before washing off with water.

Spray-Method:-
Spray concentrate RXSOL-20-2001 over all soiled areas. With in 15 and 30 minutes, RXSOL-20-2001 starts its function then rinse off by water hose. For stubborn deposits, agitation by scrubbing will assist the cleaning operation .
Cargo Tank Cleaning after Mineral Oils

Direct injection method:–
Make a solution of RXSOL-20-2001 between 0.1 and 2.0% i.e. one to twenty liters per ton wash water. Then use with Tank cleaning machine, Best result are obtained when water is heated to a temperature between 60 to
80°C. Slops Should be Constantly Stripped from, tank.

Recirculation method / Ship's Rocking Motion:–

Make soln. Strength with RXSOL-20-2001 between 0.5 –3 % and used with Tank Cleaning machines OR fill the tank to 20-30% volume with sea water and add the RXSOL-20-2001 up to full dose . For better results heat the solution between 60 - 80°C.

NOTE :

Dose rate and results will vary depending on amount of contamination.
Spot cleaning- RXSOL-20-2001 (concentrate) can be sprayed over surfaces and left for 20 - 30 minutes Finally wash down the tank surfaces with hot water between 60°C and 80°C with high pressure machine . Keep stripping tank slops and transfer to holding tank/slop tank. Cleaning of the Oil side of Lube Oil Heat Exchangers Cleaning is best achieved by the recirculation method using a heated 20% solution of RXSOL-20-2001.

1) First of all drain off any remaining oil from Heat Exchanger.
2) Connect the discharge side of a portable pump to the lower heat exchanger connection & the suction Side of the pump to the bottom outlet of a 200 liter drum.

3) Complete the circuit by connecting the upper connection on the heat exchanger to the top of the drum.
4) Maintain the bath temperature between 60-80 0 C throughout the cleaning operation. If it is not possible to heat, the operation will need to be extended.

5) Use the pump to maintain circulation for 12 to 15 hours. When the cleaning is completed, disconnect the lower heat exchanger connection and drain out the cleaning solution.

6) Connect a fresh water supply to the upper heat exchanger connection, and rinse until the water runs clean from the lower connection.

When rinsing is complete, disconnect the water supply and thoroughly drain and dry the heat exchanger

Product Properties

Color	**Clear light brown liquid**		
Density	In g/cm3 at 15°C: 0.99		
Flash Point	(PMCC)°C: Above 62		
Comtibility			When mixed with water, a clear emulsion is formed.
Metal	No known effect		
Rubber	May swell		
Synthetic Rubber	May swell		
Packaging	RXSOL-20-2001	(in Liters) 25 ,35 ,210	Flash Point : > None

****Used as a multi-purpose degreaser in extremely hard cleaning conditions****

Characteristics
It is cost effective, easy to apply and use.
• High emulsification on mineral oils and petroleum based chemicals.

• Safe to use on most metal surfaces, painted surfaces and tank coatings.

• Cleans oil coolers, fuel oil pre heaters and lube oil heat exchangers.

• Removes general oil contamination from machinery and engine room.

• Economical cost effective.

****For detailed information on safety & health, Please refer to Material Safety Data Sheet & /or Product Label****

Order no:	Packing
Rxsol-20-2002	20 Ltr.
	25 Ltr.

Sea cleaner Plus – RX (RXSOL-20-2002)
Degreaser and Tank Cleaner

Product Description: RXSOL-20-2002 is an extremely effective liquid blend of concentrated emulsifier with penetrating agents, mild abrasives and wetting agents which makes this an excellent liquid scouring cleansers for cleaning and degreasing of double bottom, deep tanks etc which is used for fuel oils It can also be used for BOILERS,MARINE DIESEL ENGINE COOLING WATER SYSTEM and for local cleaning and degreasing of engine rooms on deck.

Directions for Use and Dose Rates: RXSOL-20-2002 is specially formulated for cleaning double bottom, deep and wing tanks etc, used for fuel oils. It can also be used for local cleaning and degreasing of engine rooms and on deck.

Soak Method: for heavy soil put parts into undiluted RXSOL-20-2002, for general soiling use a solution of 10-30% RXSOL-20-2002 in water. Parts should be soaked for at least 30 minutes before washing off with water.

Spraying Method: Use neat RXSOL-20-2002 over all soiled areas. Allow 10-20 minutes for reaction , then rinse with high pressure water hose., Scrubbing will assist the cleaning operation for stubborn deposits. Rock and Roll Method: Recommended time to clean and gas-free under normal circumstances would be 3-6 days, for cleaning of double bottom tanks at sea.

1. First of all heat the remaining oil in tanks .

2.By stripping constantly. Flush the tank with sea water,
3.Close all suction and discharge valves .

4. 1stDose Fill the tanks by ½ to 1 liter RXSOL-20-2002 per tone of water through pipe or manhole, for 75-80% of capacity of tank to be cleaned.

5. Then fill tank to 25% capacity with sea water, raise the temperature up to 60°C maximum, and maintain this temperature for 24 hours.

6. Top up tank to 75-80% capacity with sea water, continue to heat for 48 to 72 hours.

7. Discharge and strip tank. Fill to 50-60% capacity with sea water and allow 2 hours rinsing time.
8. Discharge tank and strip, flushing tank with sea water for 2 hours, stripping continuously. When completed, inspect tank to ascertain if second cleaning is required. If so:

9. For completion add second dose of RXSOL-20-2002, fill tank with sea water 75-80% capacity and raise the temperature to 60°C maximum. Maintain this for 48 to 72 hours. And recalculate the solution.

10. Discharge and strip tank, flush with sea water, stripping continuously for 2 hours.

11. To gas-free, fill tank with sea water to overflow through vents and sounding pipes, discharge and strip completely.

Dosage Chart for Rock and Roll Cleaning:

Fuel Oil Viscosity Centistokes at 50°C	RXSOL20-2002-SC/ 1000 Liters of water	
	1st Stage	
Over 320 and sludge tanks	1 liters	0.75 liters
Up to 50	0.5 liters	

Physical Properties:

Color	Light brown liquid	
Density	In g/cm3 at 15°C: 0.9	
Flash Point	Above 70 °C	
Packaging	Order No RXSOL 20-2002-SC	Size (in liters) 20,25,35,210.

Characteristic:
.Highly effective concentrated cleaner .
.Versatile, can be used for a wide application range (for TANK or general cleaning.)
.Provides quick and thorough emulsifying action.
.Can be used for cleaning , gas freeing of double bottom, deep and other fuel oil bunker tanks.

Order no:	Packing
Rxsol-10-2003	20 Ltr.
	25 Ltr.

COLD WASH GENERAL(RXSOL-10-2003)

Introduction:

RXSOL-10-2003-CW is a unique formulation blended with oxidized fatty Compound and high flash point solvents(due to that can be used undiluted up to 70°C) with powerful dispersing agent along with ionic and non ionic surfactant . OB1005 is readily soluble in water in all proportions.RXSOL-10-2003 is non- corrosive to metal like copper, aluminum, Mild steel, and plastic. It is non toxic which makes handling easy.

Functions:

Complete removal of dirt, oil, carbonized grease, heavy oil, gum , vegetable oil , Lube oil, soot , asphalt ,paraffin, carbon stains etc. Gives clear finish to the surface.
Highly effective for the removal of crude and other high melting point stains

PROEDURE OF USE :

1st Method (SPRAY METHOD):- Mix 1 part of RXSOL-10-2003-CW with 2 -10 parts of water / GAS-OIL (For heavy oil, greasy surface use directly)Spray directly on the entire surface to be cleaned. This can be achieved by Hand spray / mechanical spray pump. Immediately after 2 -5 minted of spray the RXSOL-10-2003-CW starts its function. The Dirt, oil grease etc will loosen. 5 to 6 minutes after spraying start rinsing the system with water (High pressure recommended). Dirt and mud starts vanishing with cleaning media and water.

2nd Method (IMMERSION PROCESS):-Application in immersion process with or without ultrasonic support, manual wiping.

3rd Method (RE-CIRCULATION METHOD):-RXSOL-10-2003-CW is also used in conjunction with alkaline degreasing bath at 2-10% (v/v) concentration for better and quick degreasing action. Either's the bath is heated to be 70°Cor the solution can be stirred or air agitated. FINALLY RINSE THE SYSTEM WITH FRESH WATER.

PRODUCT PROPERTIES :-

Appearance	**Clear amber brown liquid**
Density	In g/cm3 at 15°C: 0.95
Flash Point	Above 70°C (on dilution with water more than 90°C)
Compatibility	
Metal	No known effect
Rubber	May swell
Synthetic rubber	May swell
PACKAGING	Size (in liters): 25,/30,/210

Advantages :

RXSOL-10-2003 is easily soluble in water Action is quite fast even at low temperature which gives advantages of cleaning under operation And avoid shut down and down time. on corrosive to most of the metals / plastics. Gives clear finish to the surface .Lower cost due to high concentration

Fields of Application :

Treated for the really tough daily cleaning problems faced in the proper Maintenance of Industrial and Institutional physical plants. Can be used as a stripper for all types of waxes and finishes and as a Degreaser where regular cleaners will not perform. May be brushed on , sprayed or used in a dip tank . Excellent for use as a wash for fuel tankers & as a liquid steam jenny compound.

Caution :

AVOID contact of RXSOL-10-2003 with skin or eye Contact. If contact occurs wash with ample quantity of water.
NOTE : on dilution RXSOL-10-2003-CW is more effective and safe for use on epoxy, polyurethane ,zinc-silicate coatings and stainless steel.

Sea Clean Plus 2.3

Order no: **Packing**

Rxsol-20-2027 **25 Ltr.**

210 Ltr.

Properties:-

APPEARANCE:	**Clear pale yellow liquid.**
DENSITY in g/cm3 at 15°C:	0.8
FLASH POINT (PMCC) °C:	Above 61
pH, conc. at 20 °C:	N/A
COMPATIBILITY:	
Metal:	No known effect
Rubber:	No known effect
Synthetic rubber:	No known effect

Product Description

Seaclean Plus is a modern low-toxic, biodegradable solvent based product. It meets IMO's requirements regarding safety and pollution hazards of chemicals.

Applications

This product is excellent as a tank cleaner and degreaser. Directions for Use and Dose Rates Direct injection method - for tank cleaning machines The dose rate should be between 0.1-0.2% i.e. 1-2 liters per ton wash water. Recirculation method - for tank cleaning machines It is advised to use a solution of 0.1-0.2% i.e. 1-2 liters per ton wash water mixed in the tank to be cleaned. The washing solution is usually 5-10% of the tank capacity. Dose rates and results will vary depending on contamination, the temperature of the cleaning solution, and number of tanks to be cleaned with the solution. Best results are obtained when water is heated to a temperature between 65-80°C.

Spot cleaning

Seaclean Plus can be sprayed neat onto tank surfaces to be cleaned. The contact time should be at least 30 minutes. Bulkheads/walls can be washed down by use of tank washing machines or high pressure cleaning machines. The best result is achieved with hot water between 60-80°C. Slops should be constantly stripped from the tank and transferred to a holding tank or pumped ashore to slop tanks.

Spray method

Spray Seaclean Plus undiluted onto soiled areas. Allow between 15-30 minutes of penetration time before rinsing off with water.

Features, Benefits and Applications

- Highly concentrated tank cleaner with quick penetration and powerful emulsifying properties
- The emulsifying agents in this product are biological degradable
- Does not contain nonyl phenol ethoxylates or other estrogenic compounds
- Versatile, can be used for a wide range of applications.
- Easy to use by any conventional means
- Can be used for cleaning and gas-freeing of double bottom, deep, and fuel oil tanks at sea
- Can also be used for cleaning and gas-freeing of crude and refined mineral oil cargo tanks
- Can be used for degreasing and cleaning of bilge spaces and engine rooms
- Easy rinse off, leaving clean and oil-free surfaces
- Safe to use on most metal surfaces, painted surfaces and tank coatings
- Economical, very low dosage rates
- IMO approved and listed in Annex 10 of the MEPC.2/ Circular

****Read the Material Safety Data Sheet before using This product****

Order no:	Packing
Rxsol-10-2003	20 Ltr.
	25 Ltr.

COLD WASH GENERAL(RXSOL-10-2003) Introduction: RXSOL-10-2003-CW is a unique formulation blended with oxidized fatty Compound and high flash point solvents(due to that can be used undiluted up to 70°C) with powerful dispersing agent along with ionic and non ionic surfactant . OB1005 is readily soluble in water in all proportions.**RXSOL-10-2003** is non- corrosive to metal like copper, aluminum, Mild steel, and plastic. It is non toxic which makes handling easy.

Functions: Complete removal of dirt, oil, carbonized grease, heavy oil, gum , vegetable oil , Lube oil, soot , asphalt ,paraffin, carbon stains etc. Gives clear finish to the surface. Highly effective for the removal of crude and other high melting point stains

PROEDURE OF USE : 1st Method (SPRAY METHOD):- Mix 1 part of RXSOL-10-2003-CW with 2 -10 parts of water / GAS-OIL (For heavy oil, greasy surface use directly)Spray directly on the entire surface to be cleaned. This can be achieved by Hand spray / mechanical spray pump. Immediately after 2 -5 minted of spray the RXSOL-10-2003-CW starts its function. The Dirt, oil grease etc will loosen. 5 to 6 minutes after spraying start rinsing the system with water (High pressure recommended). Dirt and mud starts vanishing with cleaning media and water.

2nd Method (IMMERSION PROCESS):-Application in immersion process with or without ultrasonic support, manual wiping.

3rd Method (RE-CIRCULATION METHOD):-RXSOL-10-2003-CW is also used in conjunction with alkaline degreasing bath at 2-10% (v/v) concentration for better and quick degreasing action. Either's the bath is heated to be 70°Cor the solution can be stirred or air agitated. FINALLY RINSE THE SYSTEM WITH FRESH WATER.

PRODUCT PROPERTIES :-

Appearance	Clear amber brown liquid
Density	In g/cm3 at 15°C: 0.95
Flash Point	Above 70°C (on dilution with water more than 90°C)
Compatibility	
Metal	No known effect
Rubber	May swell
Synthetic rubber	May swell

Advantages : RXSOL-10-2003 is easily soluble in water Action is quite fast even at low temperature which gives advantages of cleaning under operation And avoid shut down and down time. on corrosive to most of the metals / plastics. Gives clear finish to the surface .Lower cost due to high concentration

Fields of Application : Treated for the really tough daily cleaning problems faced in the proper Maintenance of Industrial and Institutional physical plants. Can be used as a stripper for all types of waxes and finishes and as a Degreaser where regular cleaners will not perform. May be brushed on , sprayed or used in a dip tank . Excellent for use as a wash for fuel tankers & as a liquid steam jenny compound.

Caution : AVOID contact of RXSOL-10-2003 with skin or eye Contact. If contact occurs wash with ample quantity of water. **NOTE :** on dilution RXSOL-10-2003-CW is more effective and safe for use on epoxy, polyurethane ,zinc-silicate coatings and stainless steel.

Order no:	Packing
Rxsol-20-2004	20 Ltr.
	25 Ltr.

ALKLEEN SAFETY LIQUID-RXSOL-20-2004

Introduction:-Mixture of Emulsifier, Surfactants, Corrosion inhibitors, Rust preventive. Due to free from caustic very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas.

Properties

Density	**1.1 +/- 0.05**
Ph	12-13
Color	Clear
Odor	None
Solubility	Infinite in water

RXSOL-20-2004 is a high quality product classified as a vegetable oil, animal oil, fat, fuel oil, lube oil and pet coke residues general remover/cleaner applied to cargo and storage tanks as well as to other systems. Furthermore, it removes carbonaceous deposits .This powerful concentrated formula provides immediate and efficient results while it acts as an odor eliminator. NOTE Lower cleaning temperature required to prevent polymerization of some natural oils. But Whenever possible, the cleaning solution should be heated to 60-80°C .

Fields:-RXSOL-20-2004 containing corrosion inhibitors to prevents the corrosion of metals such as Zinc, Aluminum, Copper , Brass and Tin. RXSOL-20-2004is designed to clean Animal / Vegetables oils, Fats, Hydrocarbon removes Dirt, Link, Carbonized grease, Oil, Heavy oils etc. Specialized for Cargo Tank cleaning, Gas /Hydrocarbon freezing of tanks.

Application Method:-1st of all by stripping suction removes all possible oil (greasy materials). To prevents evaporation of lighter fraction oil flush the system with cold water. May be brushed on, sprayed (Hand spray/Direct injection) recalculate the system with RXSOL-20-2004Solution.

Handling:-Although this product is not dangerous but avoid contact with eye , naked skin , (wounded) incase contact wash with copious amount of water immediately. NOT FOR INTERNAL USE

First Aid Measure:-

Ingestion : Induce vomiting and seek medical attention.
Inhalation :Remove to fresh air
Eye Contact : Flush with water at least for 15 min

Dosage	HAND SPRAY	DIRECT INJECTION	CIRCULATION
Nature Of Residue Veg.Oil(Drying/Non Drying FishOil,Alcohol,Acids,Amines)	50-100%	% 1-5	3-5 %
ORGANIC MATERIAL (HYDROCARBON)	NA	% 1-5	2-5 %

Characteristics:-

1. Free from caustic. Safe to metal.
2. Non flammable.
3. Suitable for use on floors of all type.
4. Eliminates the need to buy & stock duplicate products because of its effectiveness. Deodorizing nature.
5. An economic highly concentrated product.
6. Also used for gas and hydrocarbon freeing of tanks

Order no:	**Packing**
Rxsol-20-2005	**20 Ltr.**
	25 Ltr.

Alkaleen Liquid heavy duty(RXSOL-20-2005)

Product-Description :RXSOL-20-2005 is a superior Heavy duty and highly concentrated water based alkaline cleaner, containing specially selected detergents and powerful long chain organic syndet , specific salts with surfactants & wetting agents . It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents, Biodegradable and minimizes the extreme hazards to personnel in handling materials. It is suitable for TANK CLEANING used for cargo hold cleaning after coal and pet coke.

Using Procedure: -First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using RXSOL-20-2005 is by direct injection followed by recirculation washing, using tank cleaning machines.

Spraying method: Directly spray on the contaminated area and let it act for 5-10 minutes. Then clean the system under high pressure. A solution of 5-10% in fresh water can be used for this purpose also , and may be sprayed on and hosed off using high pressure. Circulation method :Cleaning the oil side of tank can be cleaned by circulating through with RXSOL-20-2005

Rock and Roll method :

fill the tank with water (fresh or sea) up to 25 - 30% of its volume then 5–20% (Depend on contamination) RXSOL-20-2005 will add , let it stand for approximately 12-24 hours. Then fill with more water to 90% of the tank's capacity. This way the tank will be cleaned by natural agitation due to wave motion. Let for a few days, then drain the tank and ballast-deballast 2-3 times in order to achieve complete and thorough rinse off.

Product Properties:

Appearance	**ALKALINE CLEANER,ALCLEAN, ALCLEAN PBC , RXSOL-20-2005 / GR-50 / LAC**	**HANDLING :-Although this product is not dangerous but avoid**
contact	with eye, naked skin, (wounded) incase contact wash with	
Copious	Amount of water immediately. NOT FOR INTERNAL	
USE.		
Density	In g/cm3 at 15°C: 1.01	First Aid Measures
Compatibility		INGESTION: Induce vomiting and seek medic attention
Metal	No known effect	INHALATION: Remove to fresh air
Rubber	No known effect	EYE CONTACT: Flush with water at least for 15 min
pH	Alkaline	NOTE :Acts as an acid-neutralizing agent
Solubility	Infinite in water	It is fresh water and seawater soluble.
packaging	RXSOL-20-2005	25/210 Liters

Characteristics:

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing redeposit ion.
- Low toxic. , Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use , Water-based cleaner.
- RXSOL-20-2005 has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals. Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.
- Suitable for accommodation cleaning of woodwork, leather, desks, etc.
- Suitable for cleaning of toilets and showers.
- Suitable for cleaning of reefer boxes.
- Can be used for cleaning of windows and portholes. Also used for cleaning of dishes.
- Can be used for cleaning of hospitals.
- Can be used for hand laundry cleaning.

Order no:	Packing
Rxsol-20-2006	20 Ltr.
	25 Ltr.

Chem Break Rx ORG-RXSOL-20-2006 (SLUDGE BREAK)

For Engine Room & Cargo Tank Cleaner

Product Description:- RXSOL-20-2006 is an all purpose degreaser emulsifiers, It is an excellent blend of powerful solvent base and emulsifying inorganic products .Specially designed for engine room and cargo tank cleaning .Main feature of RXSOL-20-2006 is, it finally dissociate slop emulsion to separate oil and water .This provide us with ability to dispose of waste solution as per MARPOL & IMO rules and regulation .

Dosage:- Dose rate and results will vary depending on amount of contamination . For light contamination dilution with water up to 1:20 is recommended where as medium contamination dilution with Petro solvent , And for heavy contamination neat RXSOL-20-2006 is suggested to use.

Procedure of use:-

RXSOL-20-2006 is recommended for local cleaning & degreasing of engine rooms, bilges & tank tops. It may be applied by brush, spray, immersion, soaking, or any other conventional means.RXSOL-20-2006 is used neat. Allow a residence time of at least 20- 45 minutes where possible, to ensure good penetration & emulsification. Finally wash the system with hot water & high pressure. The emulsion residue after cleaning must be allowed to separate in a holding tank for at least 3-5 hours before passing through an oily water separator.

Tank Cleaning after Mineral Oils/ Lube Oils / Slope-Black Oil

1) Fill the tank with 1-35 liters per ton wash water. Best results are obtained when water is heated to a temperature between 65°C & 80°C then stripped constantly and transferred to a holding tank for separation. The time for this will vary depending on amount of RXSOL-20-2006 used & nature of oil being cleaned.Generally,12 hours should be sufficient before the water phase can be removed.

2) Direct Cleaning. Spray directly RXSOL-20-2006 on tank surfaces to be cleaned, left for at least 30 minutes. Finally wash with hydro gating (high pressure) machine. Hot water between 50°C & 80°C recommended

Product Properties:-

Appearance	**Clear (Raw material depended color of the effectively will, however not be impaired.)**	
Density	In g/cm^3 at 15°C: 0.93	
Flash Point	(PMCC)°C: Above 66	
Compatibility		
Metal	No known effect	
Rubber	Do not use with natural rubber compounds	
Synthetic Rubber	May swell	
Packaging	Order No	Size (in Liters)
	RXSOL-20-2006	25 , 35 , 210

Characteristics:-

High penetration & emulsification , Reduces down time.
Low toxicity, non-corrosive. Highly effective, economical solvent cleaner.

For cleaning of machinery parts, bulk heads, decks, bottom plates & any oil/grease dirty areas.
Used for cargo tank cleaning of mineral oils and petroleum based chemicals.

Order no:	Packing
Rxsol-20-2007	20 Ltr.
	25 Ltr.

CTC VOLC Cleaner-I(RXSOL-20-2007)

Description:-A very strong cleaner, which can be used to soften up / remove baked on drying oils and also used after animal and vegetable oils, fish oils, tall oils, tung oil etc. It is low toxic product with an exceptional solvency power on soil & oily matter . It is free from Hydrocarbon solvents , Biodegradable and minimizes the extreme hazards to personnel in handling materials.

Using-Procedure:-First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using RXSOL-20-2028 is by direct injection followed by recirculation washing, using tank cleaning machines.

Spraying Method:-Using CTC as delivered in drums, spray onto areas where residue remains following rough washing leave for 10-45 minutes (but do not allow to dry), then Butterworth at maximum pressure and warm water 60^{o}C for at least 3 hours, checking that there is no foam remaining in the final stages. Inspects tanks(s) and if desired result has been achieved fresh water rinse and dry.

****Make sure to take all safety precautions are followed when handling / spraying CTC****

Injection Method:- Not applicable.

Re- Circulation Method:- Fill tank with fresh water and heat up to warm 50^{o}C . IF a drop line is available on the tank line system, then start to circulate the water and add the required amount of Caustic flakes and CTC to make a 2.5% solution. A stronger solution can be made, but be advised that too much Caustic and too high temperature will result in white powder all over the tank. Under normal circumstances, between 2.5% and 4.5% will be sufficient strength. If there is no drop line, then lower Butterworth hoses into the tank from the pump stack header without machines attached and circulate through these hoses while you fill the solution material.

****Use a strainer at the pump stack when circulating any solution.**** Tank Lining– Stainless / Epoxy / Phenolic.

Characteristics: -

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic. , Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use , Water-based cleaner.
- RXSOL-20-2028 has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals. Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.

Note:- Acts as an acid-neutralizing agent.

Order no:	Packing
Rxsol-20-2008	20 Ltr.
	25 Ltr.

Hydrocarbon Remover (RXSOL-20-2008)

Description:–

A very strong low foaming cleaner, Especially formulated to soften up / remove baked on drying oils and also used after animal and vegetable oils, fish oils, tall oils, Tung oil etc. It is low toxic product with an exceptional solvency power on soil & oily matter . It is free from Hydrocarbon solvents and minimizes the extreme hazards to personnel in handling materials.

Using Procedure:-

First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using RXSOL-20-2008 is by direct injection followed by recirculation washing, using tank cleaning machines.

Spraying Method:-

Using HCF as delivered in drums, spray onto areas where residue remains following rough washing leave for 10-45 minutes (but do not allow to dry), then butterworth at maximum pressure and warm water 60^{o}C for at least 3 hours, checking that there is no foam remaining in the final stages. Inspects tanks(s) and if desired result has been achieved fresh water rinse and dry.

Make sure to take all safety precautions are followed when handling / spraying HCF

Injection Method– not applicable.

Re-circulation Method:–

Fill tank with fresh water and heat up to warm 50^{o}C . IF a drop line is available on the tank line system, then start to circulate the water and add the required amount of Caustic flakes and HCF to make a 2.5% solution. A stronger solution can be made, but be advised that too much Caustic and too high temperature will result in white powder all over the tank. Under normal circumstances, between 2.5% and 4.5% will be sufficient strength. If there is no drop line,then lower Butterworth hoses into the tank from the pump stack header without machines attached and circulate through these hoses while you fill the solution material.

*** Use a strainer at the pump stack when circulating any solution.***

Tank Lining– Stainless / Epoxy / Phenolic / Zinc-silicate.

Characteristics:

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic. , Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use , Water-based cleaner.
- RXSOL HCF 2008 has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals. Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.

Note:- Completely miscible with sea water.

Order no:	Packing
Rxsol-23-2009	20 Ltr.
	25 Ltr.

Ballast Tank Cleaner/Mud & Silt Remover

RXSOL-23-2900

Description:-

It is a odorless Colorless /Hazy Water White POLMERISED viscous liquid for Removal of sediments, silt and mud from Ballast Tank . Its polymerization dual effect mechanism help to prevent hard deposition of mud layer on metal surface as well as keeps mud particle in loose condition which causes more labor to clean . APPLICATION : POLYELECTROLYTE conditioner is highly economical , non toxic , non polluting chemical its lower concentration effectiveness with water keeps it in very

ECONOMICAL GRADE materials class. Link ()

- Proven cost effective
- Ready-to-use
- Concentrated formula
- Very low usage rates as 5 ppm
- Safe, aqueous product
- Dosing equipment available

Field For Use :

- Ballast Tanks
- Double Bottom
- Tanks
- Floating Dry-docks
- Manual Tank Cleaning
- Cooling Water Systems

Application:-

RXSOL-23-2900 may be fed full strength, or diluted with clean water, depending upon the application.RXSOL-23-2900 works best when injected into ballast piping or the ballast pump discharge during ballasting. Hyde Marine offers either automatic or semi-automatic injection systems. Each system consists of a 50 or 100 gallon supply tank, with high pressure injection pumps

connected to a RX MARINE INTERNATIONAL . Special 316 SS injection nozzles are also supplied to assist in dispersing and mixing the chemical in the ballast pipes. Installation of these systems is straightforward. All that is required is to bolt or weld the tank in place, run

tubing from the injection point, and provide shipboard power to the controller. Operation of these units is also easy. Standard systems need only to be turned on when the ballasting procedure begins, and off when the ballasting is finished. Automatic systems are designed to turn themselves on and off as needed, and require no operator assistance, except to check the holding tank level.

Applications such as tank cleaning, dry-docks and once-through cooling systems may require other types of injection systems.

Dosing Method: -

If product is regular used each time tanks are ballasted, a maintenance dosage of 2.5 Ltr/100 tones of ballast water is recommended. To clean heavy accumulation a dose rate of 10 Ltr Ballast Tank Cleaner per 100 tones of ballast water is recommended. Inject Mud & Silt Remover preferably into the suction line of the ballast or cooling water pump, to ensure thorough mixing with the incoming water. If possible, circulate the water through the tanks and the suspended mud and silt will be pumped out when deballasting.

Typical Properties

Appearance	**Hazy, water white liquid**
Odor	Distinctive/Lemon
pH	9.00-10.00
Specific Gravity	0.995 - 1.00
Viscosity	(Brookfield LV2) @ 30 rpm, 2396 SUS @ 100°F
Flash Point	(PMCC) Greater than 200°F (93°C)
Stable Tem	28°F to 130°F (-2°C to 54°C)

Benefit:

• Increases cargo carrying capacity

• Aids in removal of existing mud deposits

• Lowers corrosion rates

• Prevents mud buildup

• Easier tank inspections by regulatory agencies

• Reduces fuel costs

• Enhances tank coating performance

Features:-

• No acids, alkali or solvent.

• Biodegradable.

• Non-toxic.

• Non-flammable

• Keeps mud in suspension and cleans fouled systems.

• Removes sediments, silt and mud from ballast tanks, cooling water systems, pipelines, etc.

• Inject in small quantities into the ballast or cooling water system to be cleaned.

• Effective and economical in use.

Order no:	Packing
Rxsol-20-2018	20 Ltr.
	25 Ltr.

DYE REMOVER & ORG DICHLOR (RXSOL-20-2018)

Description:–

RXSOL ORG DICHLOR Mixture of Emulsifier, new technology OXIDIZER, Corrosion inhibitors, Rust preventive. due to free from caustic and Hydrocarbon very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas . Acts as superior quality cleaner / degreaser.

**These products become more aggressive with temperature increase, and should not be allowed to dry on tank walls or stored in cargo tanks as cleaning solution or slops.

Bleach will –

Remove odors.

Remove color.

Improve permanganate time.

Spraying – Following rough washing to a good Water White or better, apply dilute RXSOL ORG DICHLOR to 1 – 3% strength. First wet the tank surface (spray with DI water), then spray all over with Bleach, wait 30 minute (but do not allow to dry) and then rinse very well with DI water, including the tank top towards the sump. To ensure that you have covered all areas properly, this process should be carried out at least twice with good DI water.

Injection no.

Re-circulation– Following rough washing to a good Water White standard or better, apply dilute RXSOL ORG DICHLOR to 1-3% strength. Mix sufficient Bleach with fresh water in the tank and heat this mixture to 40 – 50 ^{0} C, circulate through the drop line if fitted and than circulate through Butterworth machine for 3 hours. After re-circulation immediately warm Butterworth to (50^{0} C) the tank for 3 hours at maximum pressure, increase the water temperature to 80-85 ^{o} C after 45 minutes. Check (by smell) that there is no Bleach remaining, then fresh water rinse and dry.

** When there are a number of tanks requiring re-circulation, it may be significantly more efficient to

Make up a large batch or number of batches that can be transferred on between tanks as required.

* Use a strainer at the pump stack when circulating any solution.

Tank Lining – Stainless / Zinc / Epoxy / Phenolic (Extreme care must be taken if product other than bleach substitute is to be used in any coated space).

Order no: **Packing**

Rxsol-20-2018 **20 Ltr.**

25 Ltr.

Fouling (by Micro – Organism) Preventing Agent

Biological Guard Liq.(RXSOL-40-4003)

Introduction:-

RXSOL-40-4003 is a very effective, amine based dispersing cleaner for the control of fouling by marine growth such as algae, shellfish , mussels, barnacles and micro-organisms and fungal growth in marine sea water cooling systems. Because of its molecular film forming properties, RXSOL-40-4003 is also acts as a corrosion inhibitor due to its film forming property .

Procedure Of Use:-

RXSOL-40-4003 can be used in both static and flowing systems. It should be preferably be started on a clean system from beginning stage since it is formulated to prevent growth rather than remove existing growth . (Existing Growth Can Be Clean By Using RXSOL DC 1008 / RXSOL SA 1008.) Note:- RXSOL BG 4003 Should Only Be Diluted With Fresh Water.

Dosage For sea water cooling systems:-

Dose 150 – 500 ML of RXSOL-40-4003 for every 100 tons of sea water flowing through the system per hour. The treatment should be applied daily when the vessel is on coastal waters. Normally the treatment is not required when sailing deep sea .For ballast tanks Dose 1 liter of RXSOL-40-4003 per 10 tons of water prior to ballasting, followed by a monthly dose of 2 liters per 100 tons. For Trim Tanks, Oil Rig Sea Legs and Similar Systems Dose 25 liters of RXSOL-40-4003 per 100 tons of water. General Testing for bacteria can be done with our RXSOL Dip Slide Methods(Designed to check and see anytime anywhere invisible danger Bacteria / fungus grow from Cooling / Drinking water) which indicate the extent of the bacteriological contamination.

Characteristics:-

Appearance	**Clear yellow liquid**	**VERY EFFECTIVE FOR THE CONTROL MUSSELS MICRO-ORGANISMS AND BIOLOGICAL GROWTH.**
Density	In g/cm3 at 1 5°C: 1.17	Liquid treatment which is easy to use.
Flash Point	Above 75°C	Maintains heat transfer in systems . Reduces maintenance and down time. BIODEGRADABLE .
Metal	No known effect	
Rubber	No known effect	NOT suitable for drinking water.
Packaging	RXSOL-40-4003, 25 Ltr	No danger to marine life when used as recommended.

Characteristic sulfur odor

Order no: **Packing**

Rxsol-20-2008 **25 Ltr.**

210 Ltr.

NEW ORG(RXSOL-20-2020) Degreaser and Tank Cleaner

Product Description:-RXSOL-20-2020 is an extremely effective liquid blend of concentrated emulsifier with penetrating agents , mild abrasives and wetting agents which makes this an excellent liquid scouring cleansers for cleaning and degreasing of double bottom, deep tanks etc which is used for fuel oils It can also be used for BOILERS , MARINE DIESEL ENGINE COOLING WATER SYSTEM and for local cleaning and degreasing of engine rooms on deck.

Directions for Use and Dose Rates:

RXSOL-20-2020 is specially formulated for cleaning double bottom, deep and wing tanks etc, used for fuel oils. It can also be used for local cleaning and degreasing of engine rooms and on deck. Soak Method for heavy soil put parts into undiluted RXSOL-20-2020, for general soiling use a solution of 10-30% RXSOL-20-2020 water. Parts should be soaked for at least 30 minutes before washing off with water. Spraying Method Use neat RXSOL-20-2020 over all soiled areas. Allow 10-20 minutes for reaction , then rinse with high pressure water hose., Scrubbing will assist the cleaning operation for stubborn deposits. Rock and Roll Method Recommended time to clean and gas-free under normal circumstances would be 3-6 days ,for cleaning of double bottom tanks at sea.

1) First of all heat the remaining oil in tanks.
2) By stripping constantly. flush the tank with sea water,
3) Close all suction and discharge valves .
4) 1st Dose Fill the tanks by ½ to 1 liter RXSOL-20-2020 per tone of water through pipe or manhole , for 75-80% of capacity of tank to be cleaned.
5) Then fill tank to 25% capacity with sea water, raise the temperature up to 60°C maximum, and maintain this temperature for 24 hours.
6) Top up tank to 75-80% capacity with sea water, continue to heat for 48 to 72 hours.
7) Discharge and strip tank. Fill to 50-60% capacity with sea water and allow 2 hours rinsing time.
8) Discharge tank and strip, flushing tank with sea water for 2 hours, stripping continuously. When completed, inspect tank to ascertain if second cleaning is required. If so:
9) For completion add second dose of RXSOL-20-2020, fill tank with sea water 75-80% capacity and raise the temperature to 60°C maximum. Maintain this for 48 to 72 hours. And recalculate the solution .
10) Discharge and strip tank, flush with sea water, stripping continuously for 2 hours.
11) To gas-free, fill tank with sea water to overflow through vents and sounding pipes, discharge and strip completely Dosage Chart for Rock and Roll Cleaning Fuel Oil Viscosity Centistokes at 50°C RXSOL-20-2020/ 1000 Liters of water 1st Stage 2nd Stage Over 320 and sludge tanks 1 liter 1 liter 150 - 300 1 liter 0.75 liter Up to 50 0.5 liter …

PHYSICAL PROPERTIES:

COLOUR	**Light brown liquid**	
DENSITY	In g/cm3 at 15°C: 0.9	
FLASH POINT	Above 70 °C	
PACKAGING	PACKAGING	Size (in liters)25 , 210

CHARACTERISTIC:-

- Highly effective concentrated cleaner.
- Versatile, can be used for a wide application range (for TANK or general cleaning .)
- Provides quick and thorough emulsifying action.
- Can be used for cleaning, gas freeing of double bottom, deep and other fuel oil bunker tanks.
- May also be used for cleaning and gas-freeing of crude and refined mineral oil cargo tanks.
- It can be used as a general purpose cleaner to remove oil and grease deposits and cleaning of bilge spaces and engine rooms from soiled surfaces.
- Can be used for degreasing and cleaning engine cooling water systems Read the Material Safety Data Sheet before using this product

Order no:	Packing
Rxsol-20-2012	20 Ltr.
	25 Ltr.

DUAL HD CLEANER (RXSOL-20-2012)

Introduction:-

Heavy Duty Blend of liquid cleaner, Organic Synthetic detergent and Emulsifying solvents, which makes economical to use and highly effective on heavy deposition of many soils . A very strong cleaner, which can be used to soften up / remove baked on drying oils and also used after animal and vegetable oils, fish oils, tall oils, Tung oil etc. It is low toxic product with an exceptional solvency power on soil & oily matter. It is free from Hydrocarbon solvents, Biodegradable and minimizes the extreme hazards to personnel in handling materials.

Fields of Application:-

Highly effective cleaner for cleaning of tanks, bilges, tank tops, animal oil, vegetable oil, and grime are rapidly emulsified with this chemicals. in factories for cleaning machinery, manufactured parts, engines, motors, conveyors, floors, and floor plates, machinery spaces etc. By contractors for cleaning road building machinery, scrapers, mixers, bulldozers, cranes, trucks, equipment, etc. Dirt oil, grease, animal oil, vegetable oil, and grime are rapidly emulsified and rinsed away from aluminum, brass, steel, cast, iron, chrome plate, porcelain, glass, painted surfaces, stone, cement and wood.

Application:

Materials consumption and Using procedure is completely depends up on NATURE of materials going to clean , And can be follow below :

Using Procedure:

First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using **RXSOL 20 2012** is by direct injection followed by recirculation washing, using tank cleaning machines.

Spraying Method: - Using **RXSOL 20 2012** as delivered in drums, spray onto areas where residue remains following rough washing leave for 10-45 minutes (but do not allow to dry), then Butterworth at maximum pressure and warm water 60°C for at least 3 hours, checking that there is no foam remaining in the final stages. Inspects tanks(s) and if desired result has been achieved fresh water rinse and dry.

****Make sure to take all safety precautions are followed when handling / spraying RXSOL 20 2012****

Injection Method:– not applicable.

Re-circulation Method:– Fill tank with fresh water and heat up to warm 50°C . IF a drop line is available on the tank line system, then start to circulate the water and add the required amount of Caustic flakes (if required) and **RXSOL 20 2012** to make a 0.5% to 2.5% solution. A stronger solution can be made, but be advised that too much Caustic and too high temperature will result in white powder all over the tank. Under normal circumstances, between 2.5% and 4.5% will be sufficient strength. If there is no drop line, then lower Butterworth hoses into the tank from the pump stack header without machines attached and circulate through these hoses while you fill the solution material.

*** Use a strainer at the pump stack when circulating any solution.***

Tank Lining:– Stainless / Epoxy / Phenolic

Gel method

Use 0.5 kg. RXSOL TC 1001 semi solid gel to 5 liters Of **RXSOL 20 2012**. , mixture becomes gel , which can be applied on heavy deposited vertical area for 20-30 minutes , then finally Rinse with high pressure water

for removal of solid soils.**Handling:**Non-flammable, non-explosive, and non-toxic. **RXSOL 20 2012** will cause eye irritation and possible allergenic sanitation if it comes in contact with the eyes. Avoid contact with skin and do not get in the eyes. InCase of splashing or spillage in eyes, on skin, or on clothes, flush with plenty of water, remove and wash clothing. In the event eye irritation develops see a physician.

Characteristics:

1) Removes grease, oil, carbon deposits, soil and grime.
2) Keeps loosened deposits in suspension preventing re-deposition.
3) Low toxic. , Non-flammable.
4) Free from hydrocarbon solvents.
5) Effective and economical in use, Water-based cleaner.
6) **RXSOL 20 2012** has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
7) Non-corrosive to ferrous metals. Suitable for all tank-coatings.
8) Can be used for gas and hydrocarbon freeing of tanks.
9) Can be used for deodorizing
10) Contains wetting agents.

Note: Acts as an acid-neutralizing agent.

Packaging: Is available in a wide range of container

Order no:	Packing
Rxsol-20-2015	20 Ltr.
	25 Ltr.

Description

LAC liquid alkaline cleaner is a combination of fast-acting detergents, wetting agents and alkaline cleaners blended in a water-based carrier. It is applied as a highly diluted solution, with fresh or salt water, to remove edible fats and oils, as well as light fuel and lube oils from cargo and storage tanks and associated systems. LAC liquid alkaline cleaner can be used as a tank deodorizer when tanks have been cleaned with petroleum based tank cleaners. LAC liquid alkaline cleaner can also be used as a general purpose cleaner to remove oil and grease from surfaces in the engine and deck departments and other areas where grease and oil are encountered. In addition, LAC liquid alkaline cleaner can be used in boiling out new or retuned boilers, as well as in cleaning contaminated boilers and associated systems. LAC liquid alkaline cleaner should be diluted to a concentration of 20% or less in water before use in systems containing non-ferrous metals. LAC liquid alkaline cleaner has been evaluated by the IMO Bulk Liquids and Gases (BLG) Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH) and found to meet the requirements of Paragraph 1.8.2 of the Procedures & Arrangements Standards and is listed on the IMO MEPC.2/CIRC.11. Only cleaners listed on the IMO MEPC.2/ CIRC.11 can be used for cargo tank cleaning when cargo residue slops are disposable at sea.

Application and Use:-

Preliminary Considerations for Any Cleaning Method

- Tanks should be stripped completely at the recommended cargo pumping temperatures.
- To avoid delays, all equipment for the cleaning method to be used should be onboard and in a condition ready for use before cleaning is begun.
- Tanks containing drying oils should be cleaned with cold water immediately after discharge to prevent formation of a hard, tenacious residue.
- Adequate ventilation should be provided and other standard procedures should be observed to allow personnel to enter tanks as soon as possible after unloading.

Machine Washing

- Direct Injection Method (the once-through or total loss method).
- Introduce LACTM liquid alkaline cleaner directly into the tank wash-water line by means of an educator or small metering pump. Adjust the feed rate to give the correct solution strength (0.2%-0.8%).
- The tank should be stripped continuously while washing.
- Rinse the tank with ambient temperature water immediately after cleaning with LAC liquid alkaline cleaner.
- If necessary, spot clean manually to remove any patches of soil material that remain after cleaning.

Recirculation Method

- While filling the recirculation tank with water, add the amount of LAC liquid alkaline cleaner required for correct solution strength (0.2%-0.8%).
- Except for the fact that tanks being washed are stripped back to the recirculation tank, the procedure is similar to that for once-through washing.

Rock-and-Roll Method

- Fill the tanks to be cleaned with water to the required level, at the same time adding enough LAC liquid alkaline cleaner to give correct solution strength (0.2%- 0.8%).
- If a warm or hot cleaning solution is required, apply full heat on the heating coils until proper

Spot Cleaning (Manual)

- Prepare a 1% solution of LAC liquid alkaline cleaner, using 10cc of LAC liquid alkaline cleaner per liter of water (about 1-1/4 ounces of LAC liquid alkaline cleaner per U.S. gallon of water).
- Scrub the area to be cleaned with a brush or broom using generous amounts of the cleaning solution. Protective clothing including goggles and face masks to prevent liquid from spattering into the eyes must be used.
- Flush the clean surfaces with water. It must, of course, be understood that the details of the cleaning methods including temperatures and quantities of cleaner may be subject to change due to varying conditions, all of which obviously cannot be discussed in this data sheet. Therefore, the above is a guide and not an exact procedure to follow at every occasion.

Boiler Cleaning

- Marine Chemical Cleaning Circulating Unit. a. Disconnect the bottom blow down piping after the bottom blow down valve and install a "tee." Connect a pipe from one end of the tee to waste. Install a shut-off valve in this line. Connect another pipe from the other end of the tee to the bottom of the circulating tank. Connect a pipe from the discharge of the circulating pump to the top of the boiler. Install a check valve and a shut-off valve in this line.
- Set all valves for circulation of the cleaning solution.
- Fill the boiler with 2%-6% solution (by volume) LAC liquid alkaline cleaner and water at 60° C-71o C (140° F-160° F).
- Start filling the mixing tank from the line from the bottom blow down. When the tank is full, start the circulating pump and regulate the flow of the solution so that the pump removes the water from the tank at the same rate as it is added.
- Maintain circulation of the solution at 60° C-71° C (140° F-160° F) for 8-12 hours. Heat should be obtained from a heating coil or a steam line in the cleaning solution tank. LAC liquid alkaline cleaner should never be used as an “online” cleaner.
- Drain the boiler and flush from the top down with high-pressure water to remove any loose matter and inspect.
- Return the boiler to normal operating conditions by disconnecting the circulation unit and reconnecting the blow down line.
- Refill the boiler with water and add normal start-up dosages of Rxmarine Marine boiler water treatment chemicals.
- If the boiler is not to be put into service immediately, follow standard wet layup procedures.

Product Properties

Appearance	**Clear, colorless liquid**
Specific Gravity at 25° C (77° F):	1.074
pH:	>13.0
Flash Point	N/A

****Read the Material Safety Data Sheet before using This product****

Order no:	Packing
Rxsol-16-3014	20 Ltr.
	25 Ltr.

EDGE SOL CLEANER (RXSOL-16-3014)

Product Description:-RXSOL-16-3014 is a superior Heavy duty and highly concentrated water based alkaline cleaner, containing specially selected detergents and powerful long chain organic syndet ,specific salts with surfactants & wetting agents. It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents , Biodegradable and minimizes the extreme hazards to personnel in handling materials . Also suitable for TANK CLEANING .It can be used as a general purpose cleaner to remove oil and grease deposits.

Using Procedure:-First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using RXSOL-16-3014 is by direct injection followed by recirculation washing, using tank cleaning machines. Spraying method: Directly spray on the contaminated area and let it act for 5-10 minutes. Then clean the system under high pressure. A solution of 5-10% in fresh water can be used for this purpose also , and may be sprayed on and hosed off using high pressure. Circulation method :Cleaning the oil side of tank can be cleaned by circulating through with RXSOL-16-3014.
Rock and Roll method: fill the tank with water (fresh or sea) up to 25 - 30% of its volume then 5–20% (Depend on contamination) RXSOL-16-3014 will add , let it stand for approximately 12-24 hours. Then fill with more water to 90% of the tank's capacity. This way the tank will be cleaned by natural agitation due to wave motion. Let for a few days, then drain the tank and ballast-deballast 2-3 times in order to achieve complete and thorough rinse off.

Characteristics :-Removes grease, oil, carbon deposits, soil and grime.

Keeps loosened deposits in suspension preventing re-deposition.
Low toxic. , Non-flammable.

Free from hydrocarbon solvents.

Effective and economical in use , Water-based cleaner.

RXSOL-16-3014 has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.Non-corrosive to ferrous metals. Suitable for all tank-coatings.Can be used for gas and hydrocarbon freeing of tanks.Can be used for deodorizing Contains wetting agents.Suitable for accommodation cleaning of wood work, leather, desks, etc.

Suitable for cleaning of toilets and showers. Suitable for cleaning of reefer boxes.

Can be used for cleaning of windows and portholes. Also used for cleaning of dishes.

Can be used for cleaning of hospitals.

Can be used for hand laundry cleaning.

Product Properties:-

Appearance	**Pale yellow liquid**	**HANDLING:-Although this product is not dangerous but avoid contact with eye, naked skin, (wounded) incase contact wash with copious amount of water immediately. NOT FOR INTERNAL USE.**
Density	In g/cm3 at 15°C: 1.21	FIRST AID MEASURES
Compatibility		INGESTION: Induce vomiting and seek medical attention.
Metal	No known effect	INHALATION: Remove to fresh air
Rubber	No known effect	EYE CONTACT: Flush with water at least for 15 min.
pH	Alkaline	NOTE: Acts as an acid-neutralizing agent.
Solubility	Infinite in water	It is fresh water and seawater soluble.
Packaging	RXSOL-16-3014	Effectively dissolves all fat, vegetable and animal oil .
	35 / 50	

Order no:	Packing
Rxsol-20-2030	20 Ltr.
	25 Ltr.
	210 Ltr.

RXSOL-20-2030 Degreaser and Tank Cleaner

Product Description

RXSOL-20-2030 is an extremely effective liquid blend of concentrated emulsifier with penetrating agents, mild abrasives and wetting agents which makes this an excellent liquid scouring cleansers for cleaning and degreasing of double bottom, deep tanks etc which is used for fuel oils It can also be used for BOILERS, MARINE DIESEL ENGINE COOLING WATER SYSTEM and for local cleaning and degreasing of engine rooms on deck.

Directions for Use and Dose Rates: RXSOL-20-2030 is specially formulated for cleaning double bottom, deep and wing tanks etc, used for fuel oils. It can also be used for local cleaning and degreasing of engine rooms and on deck. Soak Method for heavy soil put parts into undiluted RXSOL-20-2030, for general soiling use a solution of 10-30% RXSOL-20 water. Parts should be soaked for at least 30 minutes before washing off with water. Spraying Method Use neat RXSOL-20-2030 over all soiled areas. Allow 10-20 minutes for reaction , then rinse with high pressure water hose., Scrubbing will assist the cleaning operation for stubborn deposits.

Rock and Roll Method Recommended time to clean and gas-free under normal circumstances would be 3-6 days ,for cleaning of double bottom tanks at sea.

1) First of all heat the remaining oil in tanks .

2)By stripping constantly. flush the tank with sea water,

3) Close all suction and discharge valves.

4) 1st Dose Fill the tanks by ½ to 1 liter RXSOL-20-2030 per ton of water through pipe or manhole, for 75-80% of capacity of tank to be cleaned.

5) Then fill tank to 25% capacity with sea water, raise the temperature up to 60°C maximum, and maintain this temperature for 24 hours.

6) Top up tank to 75-80% capacity with sea water, continue to heat for 48 to 72 hours.

7) Discharge and strip tank. Fill to 50-60% capacity with sea water and allow 2 hours rinsing time.

8) Discharge tank and strip, flushing tank with sea water for 2 hours, stripping continuously. When completed, inspect tank to ascertain if second cleaning is required. If so:

9) For completion add second dose of RXSOL-20-2030 , fill tank with sea water 75-80% capacity and raise the temperature to 60°C maximum. Maintain this for 48 to 72 hours. And recalculate the solution.

10) Discharge and strip tank, flush with sea water, stripping continuously for 2 hours.

11) To gas-free, fill tank with sea water to overflow through vents and sounding pipes, discharge and strip completely
Dosage Chart for Rock and Roll Cleaning
Fuel Oil Viscosity Centistokes at 50°C
RXSOL-20-2020/ 1000 Liters of water
1st Stage 2nd Stage Over 320 and sludge tanks 1 liter 1 liter 150 - 300 1 liter 0.75 liter Up to 50 0.5 liter …

PHYSICAL PROPERTIES:

COLOUR	**Light brown liquid**	
DENSITY	In g/cm3 at 15°C: 0.9	
FLASH POINT	Above 70 °C	
PACKAGING	Order No:.RXSOL-20-2030-210	Size (in liters)25 , 210

CHARACTERISTIC:

• Highly effective concentrated cleaner.

• Versatile, can be used for a wide application range (for TANK or general cleaning .)

• Provides quick and thorough emulsifying action.

• Can be used for cleaning, gas freeing of double bottom, deep and other fuel oil bunker tanks.

• May also be used for cleaning and gas-freeing of crude and refined mineral oil cargo tanks.

• It can be used as a general purpose cleaner to remove oil and grease deposits and cleaning of bilge spaces and engine rooms from soiled surfaces.

• Can be used for degreasing and cleaning engine cooling water systems Read the Material Safety Data Sheet before using this product

Order no: **Packing**

RXSOL-20-3001 **20 Ltr.**

25 Ltr.

INVIRO CLEANER (RXSOL-20-300) LOW-TOXIC Degreaser For Cargo &Tank

Product Description : A unique blend of emulsifier , penetrating agents , mild abrasives and wetting agent make this an excellent liquid scouring cleansers. Very effective for the control of cleaning and degreasing . All ingredients are bio-degradable and safe to the persons handling it. Pleasant citrus odor .Scientifically advanced versatile cleaner can be used for tank or general cleaning

Product Uses: RXSOL-20-300 may be used in all types of cleaning and degreasing operations and is very effective against oil , grease and many other difficult soils.

Application Manual Degreasing : May be applied neat or diluted with water up to 1 part to 15 – 20 parts by using a cloth ,brush or spray. After use as an engine room cleaner, bilge slops must be allowed to separate for at least 3 hrs before passing through an oily water separator.

Tank & Bilge Cleaning: RXSOL-20-300 is recommended for any of the standard tank cleaning methods including ship motion , pressure spray washing and recirculation method after mineral, animal, fish and vegetable oils.

Note : FOR Hydrocarbon freeing after cleaning with hydrocarbon solvent cleaners like Seaclean (RXSOL SC 2002), Tank clean (RXSOL 2001) and OSD (RXSOL OD 1012) etc.

Application - Method (Dose Rate)

By Washing Machine	**For direct injection into tank This will require a solution strength between 0.03 and 1.5%, (0.3-15 its per thousand its of wash water).**
By Recirculation Method	Working strength should be 0.05 and 1% (0.5–10 Liters per ton wash water) by weight in fresh water , based on capacity of the equipment . This solution can be re-used until no longer effective.
Spot cleaning	RXSOL-20-300 can be hand sprayed neat or diluted up to 5 parts water and allow 15 to 20 minutes contact time to penetrate deposits . Finally wash off with water jet The best results will be obtained when wash water is heated to 40-60°C

Product Properties	**Environmentally safe.**	**Highly effective Water-based degreaser.**
Appearance Orange liquid	Orange liquid	Ingredients are all biodegradable
Flash Point	(PMCC)°C: None	Non-flammable, Pleasant citrus odor.
Density: Compatibility	In g/cm3 at 15°C: 1.0	Highly cost effective concentrated cleaner Very economical dilution rate, 1 to 15 parts of water.
Metal: Rubber	No known effect	Can be used as Accommodation cleaner for bulkheads, decks and toilets. Compatible on most types of plastics and vinyl's floor
Packaging	inviro Clean Size (in Ltr)	RXSOL-20-300 / 25/ 210 Lt

Versatile can be used for tank cleaning or general cleaning,RXSOL-20-300 has numerous general marine cleaning&degreasing applications including the removal of greases,oil,sludge,polymer

compounds,carbon deposits, general dirt and grime .Phase separation after cleaning, releasing the oil phase for reclamation .

Order no:	Packing
Rxsol-20-3002	20 Ltr.
	25 Ltr.

Highly conc. tuff Cleaner Rx tuff (ALKATUFF)

RXSOL-20-3002

Product Description:-

RXSOL-20-3002 is a highly concentrate water-based cleaner for use as a tank cleaner or general degreasing. It contains wetting agents ,penetrating agents & alkaline materials with heavy molecular surfactants.

Procedure-of-Use:
General-Cleaning:- RXSOL-20-3002 is not suitable for use with Aluminum, Magnesium and Zinc Silicate coatings can be used for all types of cleaning & degreasing & may be applied by brush, hand spray, high & low pressure washing machines etc.

Tank Cleaning : For removal of residues of Minerals ,Animals ,Vegetable or Fish oil, Waxes & Soot from systems.

Methods-of-Application-and-Dose Rates :-

1.**Injection method** for tank washing machines .Dose rate 1-10 Ltr. per ton wash water 0.11%
2.**Circulation method**. Dose rate 1-10 liters per ton wash water (0.1-1%).

3.**Direct Spot cleaning** .Hand spray concentrate or diluted with up to 5 parts water & leave for several minutes
before rinsing off with clean water.

For Cargo Tanks to Remove Soot from Systems: -

1.Spray RXSOL-20-3002 on with a high pressure cleaning machine and use1:6 with water. If used with hand sprayer, spray the product concentrate onto the surface, allowing 1 lit. for every 10-12 m2.Use a 5-8% solution in a tank washing machine.

2.Leave for about 30-60 minutes. The surface should be kept wet.

3.Wash down with hot water (80°C) and check the cargo tank.
4.Repeat the procedure if necessary.

NOTE: Rx tuff is not suitable for use with Aluminum, Magnesium & Zinc Silicate coatings.

Product Properties:-

Appearance	**Orange liquid**
Density	In g/cm3 at 20°C: 1.06.
Compatibility	
Metal	The conc. product may react with Aluminum, Zinc, Tin & their Alloys.
Rubber	No known effect
pH	13

Characteristics:-

- Water-based cleaner. Biodegradable. Non-flammable. Free from hydrocarbon solvents. Effective & economical in use.RXSOL-20-3002 has numerous cleaning applications including removal of Greases, Waxes, Oil, Sludge, Soot, Carbon deposits & General dirt and Grime. Suitable for cargo tank cleaning, Particularly applicable for removing soot deposits from systems.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-16-3003	20 Ltr.
	25 Ltr.

Aqua Break RX (RXSOL-16-3003)

Product Introduction: RXSOL-16-3003 Mixture of Emulsifier, new technology surfactants (With high solvency and emulsification effect), Corrosion inhibitors, Rust preventive. due to free from caustic and Hydrocarbon very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas. Acts as superior quality cleaner/degreaser.

Fields:

RXSOL-16-3003 containing corrosion inhibitors to prevents the corrosion of metals such as Aluminum, Copper, Brass and Tin. RXSOL-16-3003 is designed to clean Animal /Vegetables oils, Fats, Hydrocarbon removes Dirt, Link ,Carbonized grease, Oil, Heavy oils etc. Specialized for all types of cleaning and degreasing. may be applied by brush, hand spray or used in ultrasonic cleaning tanks, immersion soak tanks and high and low pressure spray appliances. May be used neat or diluted by up to 50 parts of water according to the amount and type of soil to be removed.

Tank Cleaning : (Cargo tank cleaning after mineral , animal, vegetable and fish oil.)

Method of Application and Doses: 1st of all by stripping suction removes all possible oil (greasy materials).To prevents evaporation of lighter fraction oil flush the system with cold water. May be brushed on, sprayed (Hand spray/Direct injection) recalculate the system with RXSOL-16-3003 Solution.

1.Cleaning with washing machines. Dose rate: 0.3-5 Ltr per ton wash water (0.03-0.5%).

2.Cleaning with recirculation method. Dose rate: 0.5-10 Ltr per ton wash water, (0.05-1%)
3.Spot cleaning. Hand sprayed neat or diluted up to1-10 parts water and left for about 15-20 minutes before washing. Of

Appearance	Pale yellow clear liquid	Compatible with oily water separators
Odor/Solubility	None / Infinite in Water	Releasing the oil phase for reclamation. Suitable for all types of floors. Deodorizing nature
Density	In g/cm3 at 15°C: 1.0 +/- 0.05	Eliminates the need to buy & stock duplicate products because of its effectiveness.
Compatibility		An economic highly concentrated product.
Metal Rubber	May attack Zinc at concentrated solutions No known effect	Also used for gas and hydrocarbon freeing of tanks. Free from caustic & hydrocarbon, Non flammable Water based, Biodegradable. Safe to metal
pH Neat	12	PACKAGING : RXSOL-16-3003

RXSOL-16-3003 has numerous general cleaning applications including the removal of greases, oil, sludge, carbon deposits, general dirt and grime. Can be used as engine room cleaner. Suitable for cargo tank cleaning. Can be used as accommodation cleaner for bulkheads, decks, toilets. Suitable for cleaning of soiled textiles as rugs , covers ,mats, overalls ,etc .Effectively cleans glass fiber boats, hulls and painted surfaces

**** Read the Material Safety Data Sheet before using this product ****

Order no: **Packing**

Rxsol-UW-3004 **20 Ltr.**

25 Ltr.

Universal-Wash-Rx (RXSOL-UW-3004)

General Purpose cleaner

Product Description:-

Universal-**Wash-Rx** is a superior versatile multipurpose cleaning liquid detergent with good foaming qualities .It contains wetting agents that allow rapid penetration to remove light oil or dirt from any surface. Powerful for the toughest task and very economical – dilute for most cleaning needs.

Directions for Use and Dose Rates:-

For hard Surfaces like floor woodwork walls appliances worktops, use 30 ml in 5 liters of hot water. Depending on degree of contamination **Uni**versal-**Wash-Rx** should be mixed with warm water at a rate of 30-250 ml per 10 to 15 liters. i.e. ½ to full cup of **Uni**versal-**Wash-Rx** to a bucket of water. **Uni**versal-**Wash-Rx** solution can be applied simply by mops, brushes or rags, or by dipping the soiled articles into the **Uni**versal-**Wash-Rx** solution. After cleaning, rinse off with cold or warm water. Due to high foaming properties, **Uni**versal-**Wash-Rx** is not recommended for **Washing machines**.

Stain Removal:-

Apply full strength before washing to remove stain from washable materials . Rinse well .

Product Properties:-

Appearance	**Pale yellow liquid**	**Contains wetting agents**
Density	In g/cm^3 at 15°C: 1.0	Very economical & Non-flammable.
Compatibility		Pleasant Odor , Leaves surfaces residue free
Metal	No known effect	Biodegradable and Low toxic.
Rubber	No known effect	Acceptable for use in food areas
pH Neat	8	
Packaging	25 / 35 / 50 / 210	

Characteristics:-

- Suitable for accommodation cleaning of Woodwork, Leather, Desks, etc.
- Suitable for cleaning of toilets and showers.
- Suitable for cleaning of refer boxes.
- Can be used for cleaning of Windows and portholes.
- Can be used for cleaning of Paint brushes.
- Can be used for cleaning of dishes.
- Can be used for cleaning of hospitals.
- Can be used for hand laundry cleaning

****Read the Material Safety Data Sheet before using this product ****

Order no:	Packing
Rxsol-16-3006	20 Ltr.
	25 Ltr.

Ultrasonic Cleaner (RXSOL-16-3006)

Product Description:-RXSOL-16-3006 is a superior & powerful alkaline cleaner containing corrosion inhibitors to prevents the corrosion of metals . It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents, Biodegradable and minimizes the extreme hazards to personnel in handling materials .It is specially formulated for ultrasonic cleaning applications.

Applications:-RXSOL-16-3006 Suitable for cleaning engine components like fuel and Lube oil filters, Injection nozzles, pump components, inlet and exhaust valves & primarily refers to cleaning of hard surfaces, such as Decks, Tanks, Engine-rooms, etc. can be used for all types of cleaning and degreasing and may be applied by brush, hand spray, high and low pressure washing machines etc.

Directions for Use and Dose Rates:-

General Cleaning:-RXSOL-16-3006 can be used for all types of cleaning & degreasing & may be applied by Brush, Hand spray, high and low pressure washing machines etc. Time necessary for cleaning depends on the nature and thickness of the deposits. 20-30 min. will suffice for most applications. Hardened, carbonized or aged deposits may require up to 4 hours. If the cleaning solution is not heavily contaminated, it may be re-used at a later stage. If allowed to cool, the de-gassing procedure must be repeated. Depending on degree of contamination **RXSOL-16-3006** should be mixed with warm water at a rate of 50-200 ml per 10 liters. i.e. 1 cup of **RXSOL-16-3006** to a bucket of water. **RXSOL-16-3006** solution can be applied simply by mops, brushes or rags, or by dipping the soiled articles into the **RXSOL-16-3006** solution. After cleaning, rinse off with cold or warm water.

Procedure for Use With Ultrasonic Equip:-Fill the ultrasonic unit chamber with approx. 30-35 liters of clean fresh water. During cleaning process, the ultrasonic bath must be de-gassed. Allow the bath to run for 1-2 minutes without any objects or cleaning agent until the evolution of gas bubbles ceases. This is to enhance the cleaning effect. Add 1 liter **RXSOL-16-3006** For heavy stubborn deposits, a second liter may be added for rapid action.

Precaution:-To avoid foaming, make sure that the water is filled prior to adding **RXSOL-16-3006** Best results are obtained at temperatures of 60-80°C. For general cleaning it may takes 15 –30 minutes while for Hardened, carbonized or aged deposits may require up to 4-6 hours.

Tank Cleaning:-Cargo tank cleaning to remove residues of Mineral, Animal, Vegetable or Fish oil, Waxes & Soot from inert gas systems.

Method of Application and Dose Rates:-Direct injection method for tank washing machines. Dose rate 1-5 liters per ton wash water (0.1-0.5%). Recirculation method. Dose rate 1-7 liters per ton wash water (0.1-0.7%).Spot cleaning. Hand spray neat or diluted with up to 5 parts water and leave for several minutes before rinsing off with clean water.

Cleaning of Cargo Tanks to Remove Soot from Inert Gas Systems:-Spray **RXSOL-16-3006** on with a high pressure cleaning machine and use 1:6 with water. If used with hand sprayer, spray the product neat onto the surface, allowing 1 lit. for every 12 m2. Use a 5-8% solution in a tank washing machine. Leave for about 30-45 minutes. The surface should be kept wet. Wash down with hot water (80°C) and check the cargo tank. Repeat the procedure if necessary.

Note:-Whenever possible, the cleaning solution should be heated to 60-80°C. If this method is not possible, other conventional methods such as separate rate direct injection, recirculation or hand spraying provide acceptable options. For boiler fire side cleaning, a 10-20 % hot solution, (temp. above 40°C), should be sprayed on to the surfaces to be cleaned. Allow

to penetrate for 20 minutes and flush off. For deposits which are very hard to remove, increase the concentration to 50% and repeat if necessary

Product Properties:-

Appearance	**Green.**	
Density	1.0 g/cm^3 at 20°C	
Compatibility		
Metal	May attack zinc, aluminium and magnesium at concentrated solutions	
Rubber	No known effect	
pH neat	12	
Synthetic Rubber	May swell	
Packaging	**RXSOL-16-3006**	Size (in liters)
		25 liters / 210 liters

Characteristics:-

- Specially developed for use with ultrasonic cleaning baths.
- Removes grease, oil, carbon deposits, soil and grime.
- Water-based.
- Low-toxic.
- Biodegradable.
- Non-flammable.
- Compatible with oily-water separators.
- Very effective and economical in use

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-22-3005	20 Ltr.
	25 Ltr.

High Pressure-WASH (CLEANER) RXSOL-22-3005

Highly Conc. liquid Detergent (Specialized for High Pressure Washing Machines)

Product Description:-

This type of cleaner specifically formulated for use with high pressure advanced technology cleaning machines. RXSOL-22-3005 is concentrated liquid formulation of a non-caustic alkaline cleaner with emulsifier, detergents, Surfactants, Corrosion inhibitors, Rust preventive. Due to free from caustic very gentle on hands. RXSOL-22-3005 quickly dissolves and removes grease and dirt deposits after emulsification. Compatible with most painted surfaces and dries leaving a good shine.

Procedure of Use with Dose Rates:-

Economical Usage:-

Dilute the concentrate RXSOL-22-3005 with fresh water between 0.3 to 5 % ratios, and then spray the solution on surface to be clean, for heavily soiled areas, a preliminary cleaning is required. Allow solution to penetrate soil for complete emulsification about 3-5 minutes before washing off thoroughly with high pressure water.

GENERAL WASH:-

Dilute 1 part concentrate to 5 parts water or up to 20 parts water depends on contamination of deposit RXSOL-22-3005can be used for conventional cleaning using brush, rag or spray. Allow solution 3-5 minutes for emulsification, and then rinse off with water.

Product Properties:

APPEARANCE	***Greenish liquid***	***Versatile for multipurpose cleaning.***
DENSITY	In g/cm^3 : 1.1 at 15°C	Cuts through heavy grease and grime
COMPATIBILITY		*Economical – dilute for most cleaning needs*
Metal	Avoid contact with aluminum, zinc, Tin and their alloys. In concentrated stage	Formulated for use with High Pressure cleaning machines. Non-flammable.
Rubber	May swell	Suitable with hot or cold high pressure esp.
pH Neat	13 - 14	Free from caustic.
PACKAGING	RXSOL HP 3005 20/25/35/210 Liters	Cleaning of cargo holds, tanks and refrigeration vessels. fishing vessels holds and machinery

Note:-

After cleaning affects shining property. Can be used for cleaning of outside paintwork and decks.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-22-2210	25 Ltr.
	210 Ltr.

Rxsol hold block is a heavy duty cleaning solution to clean the hold of the vessels which carrying corrosive and / or messy cargos such as sulphur salt petcock coal and concentrates. It can be easily removed with it

Features:-

- Product metal against corrosive cargo
- Products paint against cargo penetration
- Environmentally friendly
- Safe to use in occupied / covered areas
- Reduces turn around times
- Easy to direct spray

1. If hold cleaning is to be performed from tank top level only powerful equipment designed for cargo hold cleaning will do the job in a minimum of time.

2. Effective cleaning chemicals that can dissolve stains and remove discoloring are required the crew needs to have effective equipment to apply these chemicals from tank top level personal proactive equipment is required depending on type and condition of hold paint chemical that protect the paint may also be needed

3. And don't forget procedures have to be drown up and your

4. Crew trained for the job

5. Standardization of equipment and chemical onboard you ship will make life easier for your seaman and save your time

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-22-2204	20 Ltr.
	25 Ltr.

Rxsol hold wash is a versatile all purpose marine cleaning solution it can be used as a powerful\ stand alone cleaner for oily stains and reduces or in combination with Rxsol hold wash as a barrier remover

Features & Benefit:-

- Heavy duty hydrocarbon remover
- Can be diluted to suit cleaning needs
- Environmentally friendly
- Safe to use onto the occupied areas /covered areas
- Reduces the turnaround times
- Cam be easily applied by ship's crew

Rxsol has the wide range of chemicals for cleaning chemicals for any type of vessel Including those carrying coal petcock & related to get the cargo hold clean for the next cargo choice of suitable cleaning chemical is essential & very important when applied the chemical resident type apply as important role as a surface active agent need time to penetrate & to take outside particular from the hold surface

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-20-3018	20 Ltr.
	25 Ltr.

Aqua Clean HD(RXSOL-20-3018)

Product Introduction :-

RXSOL-20-3018 Mixture of Emulsifier, new technology surfactants (With high solvency and emulsification effect) , Corrosion inhibitors, Rust preventive. due to free from caustic and Hydrocarbon very gentle on hands & ideal for cleaning Walls Wood works, Metals and all areas . Acts as superior quality cleaner / degreaser .

FIELDS :-

RXSOL-20-3018 containing corrosion inhibitors to prevents the corrosion of metals such as Aluminum, Copper, Brass and Tin. RXSOL-20-3018 is designed to clean Animal / Vegetables oils, Fats, Hydrocarbon removes Dirt, Link, Carbonized grease, Oil, Heavy oils etc. Specialized for all types of cleaning and degreasing. May be applied by brush, hand spray or used in ultrasonic cleaning tanks, immersion soak tanks and high and low pressure spray appliances. May be used neat or diluted by up to 50 parts of water according to the amount and type of soil to be removed.

Tank Cleaning :-

(Cargo tank cleaning after mineral, animal, vegetable and fish oil.)

Method of Application and Doses :- 1st of all by stripping suction removes all possible oil (greasy materials). To prevents evaporation of lighter fraction oil flush the system with cold water. May be brushed on, sprayed (Hand spray/Direct injection) recalculate the system with RXSOL-20-3018 Solution.

1 Cleaning with washing machines. Dose rate: 0.3-5 liter per ton wash water (0.03-0.5%).
2 Cleaning with recirculation method. Dose rate: 0.5-10 liter per ton wash water, (0.05-1%).

3 Spot cleaning. Hand sprayed neat or diluted up to 1-10 parts water and left for about 15-20 minutes before washing off.

DOSAGE:

NATURE OF RESIDUE Veg.Oil (Drying/Non Drying Fish Oil,Alcohol,Acids,Amines)	HAND SPRAY 1-10%	DIRECT INJECTION 0.03-0.5%	CIRCULATION 0.05-0.7 %
ORGANIC MATERIAL (HYDROCARBON)	NA	0.0 5-0.5%	0.05-0.7%

PRODUCT PROPERTIES:

APPEARANCE	**Pale yellow clear liquid**	**Compatible with oily water separators**
ODOUR / SOLUBILITY	NONE / INFINITE IN WATER	Releasing the oil phase for reclamation. Suitable for all types of floors. Deodorizing nature
DENSITY	In g/cm3 at 15°C: 1.0 +/- 0.05	Eliminates the need to buy & stock duplicate products because of its effectiveness.
COMPATIBILITY		An economic highly concentrated product.
Metal Rubber	May attack Zinc at concentrated solutions No known effect	Also used for gas and hydrocarbon freeing of tanks. Free from caustic & hydrocarbon , Non flammable Water based , Biodegradable .Safe to metal
pH Neat	12	RXSOL-20-3018

RXSOL-20-3018 has numerous general cleaning applications including the removal of greases, oil, sludge, carbon deposits, general dirt and grime. Can be used as engine room cleaner. Suitable for cargo tank cleaning. Can be used as accommodation cleaner for bulkheads, decks, toilets. Suitable for cleaning of soiled textiles as rugs, covers, mats, overalls, etc. Effectively cleans glass fiber boats, hulls and painted surfaces

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-22-3002	20 Ltr.
	25 Ltr.

RXTUFF HIGH FOAM LIQUID - HD (RXSOL-22-3002)

The Importance of Rx Tuff by High-Pressure Cleaning

The job of high pressure cleaning can be done easier & quicker by simply using Rx Tuff in correct dosages. Using a high pressure cleaner alone, without any CLEANER, will not achieve optimal cleaning results High-pressure cleaning primarily refers to cleaning of Hard surfaces, such as Decks, Tanks, Engine-rooms, etc. and in the majority of cases the cleaning is done according to the so-called two-step method:

Step 1: Spraying the Rx Tuff over the area to be cleaned.
Step 2: Washing down the area using a high-pressure water jet.

After the Rx Tuff has been sprayed on the surface and before the wash down begins, the chemicals penetrate & thoroughly moistens dirt & other grime. During wash down, the Rx Tuff thoroughly dissolves the particles of dirt, even oil and fat, in the water spray and thus achieves optimal cleaning results. In addition to being more effective, the use of Rx Tuff substantially reduces the time required for the Cleaning operation, as well as preventing dirt from reforming on the surface. The use of Rx Tuff in correct dosages is half the job done.

3 Pieces of Good Advice:

Apply Rx Tuff on dry surface where possible! A dry surface will absorb far better than a wet surface. When applying Rx Tuff on vertical surfaces: Start application from the bottom and work upwards! If beginning from the top and going downwards, the Rx Tuff may produce "channels" down the surface, thereby running too fast off the surface. During high pressure cleaning: It is important that the rinsing water does not run over non-cleaned surfaces! The rinsing water can draw soap from the surface if running over non-cleaned surfaces. High Pressure together with optimum concentration of Rx Tuff will give the best effect.

Product Description:-Rx Tuff is superior & powerful alkaline cleaner containing corrosion inhibitors to prevents the corrosion of metals. It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents, Biodegradable and minimizes the extreme hazards to personnel in handling materials.

Applications:-Rx Tuff Suitable for cleaning engine components like fuel and Lube oil filters, Injection nozzles, pump components, inlet and exhaust valves & primarily refers to cleaning of hard surfaces, such as Decks, Tanks, Engine-rooms, etc. can be used for all types of cleaning and degreasing and may be applied by brush, hand spray, high and low pressure washing machines etc.

Directions for Use and Dose Rates:

General Cleaning:- Rx Tuff can be used for all types of cleaning & degreasing & may be applied by Brush, Hand spray, high and low pressure washing machines etc. Time necessary for cleaning depends on the nature and thickness of the deposits. 20-30 min. will suffice for most applications. Hardened, carbonized or aged deposits may require up to 4 hours. If the cleaning solution is not heavily contaminated, it may be re-used at a later stage. If allowed to cool, the de-gassing procedure must be repeated. Depending on degree of contamination Rx Tuff should be mixed with warm water at a rate of 50-200 ml per 10 liters. i.e. 1 cup of Rx Tuff to a bucket of water. Rx Tuff solution can be applied simply by mops, brushes or rags, or by dipping the soiled articles into the Rx Tuff solution. After cleaning, rinse off with cold or warm water. Due to high foaming properties, Rx Tuff is not recommended for washing machines.

Order no:	Packing
Rxsol-22-3002	20 Ltr.
	25 Ltr.

Tank Cleaning:-Cargo tank cleaning to remove residues of Mineral, Animal, Vegetable or Fish oil, Waxes & Soot from inert gas systems.

Method of Application and Dose Rates:-

Direct injection method for tank washing machines. Dose rate 1-5 liters per ton wash water (0.1-0.5%).

Recirculation method. Dose rate 1-7 liters per ton wash water (0.1-0.7%).

Spot cleaning. Hand spray neat or diluted with up to 5 parts water and leave for several minutes before rinsing off with clean water.

Cleaning of Cargo Tanks to Remove Soot from Inert Gas Systems:-

Spray Rx Tuff on with a high pressure cleaning machine and use 1:6 with water. If used with hand sprayer, spray the product neat onto the surface, allowing 1 lit. for every 12 m2. Use a 5-8% solution in a tank washing machine.Leave for about 30-45 minutes. The surface should be kept wet.wash down with hot water (80°C) and check the cargo tank.

Repeat the procedure if necessary.

Note:- Whenever possible, the cleaning solution should be heated to 60-80°C.If this method is not possible, other conventional methods such as separate rate direct injection, recirculation or hand spraying provide acceptable options. For boiler fire side cleaning, a 10-20 % hot solution, (temp. above 40°C), should be sprayed on to the surfaces to be cleaned. Allow to penetrate for 20 minutes and flush off. For deposits which are very hard to remove, increase the concentration to 50% and repeat if necessary.

Product Properties:-

Appearance	**Pale yellow liquid**	
Density	In g/cm^3 at 15°C: 1.01	
Compatibility		
Metal	No known effect	
Rubber	No known effect	
pH	Alkaline	
Packaging	RXSOL-22-3002	Size (in Liters)
		25, 210

Characteristics:-

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic.
- Biodegradable.
- Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use.
- Water-based cleaner.
- Rx Tuff has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals.
- Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing.
- Contains wetting agents.
- Leaves surfaces residue free.
- Acceptable for use in food areas.
- Suitable for accommodation cleaning of woodwork, leather, desks, etc.
- Suitable for cleaning of toilets and showers.
- Suitable for cleaning of reefer boxes.
- Can be used for cleaning of windows and portholes.
- Can be used for cleaning of dishes.
- Can be used for cleaning of hospitals.
- Can be used for hand laundry cleaning.

Order no:	Packing
Rxsol-40-4012	25Ltr.
	210 Ltr.

Neutral Tank Cleaning Detergent

Product Description

Unipol is a pH-neutral, liquid concentrated detergent with good cleaning qualities. It contains effective but mild and environmentally safe wetting agents and surfactants that allow rapid penetration to remove fats and oils. Unipol is especially suitable for hydrocarbon freeing of tanks, and is safe on all tank coatings including zinc silicate.

Applications

For the removal of traces of hydrocarbons to a hydrocarbon free wall wash test specification prior to loading of sensitive cargoes. Unipol may also be used as a general purpose economical tank cleaning detergent.

Directions for Use and Dose Rates

The most economical method of using Unipol is by recirculation washing, using tank cleaning machines. Make up a solution of 1–5% in preferably fresh water in the tank and recirculate. Whenever possible, the cleaning solution should be heated to 50–80°C. Rinse off with hot fresh water. Alternatively, hand spray the tank with a 20–50% solution of Unipol and allow to stay for 30–60 minutes before a final rinse with hot water. When the tank is cleaned to a “water white standard”, remove any free water and ventilate until the tank is dry.

Product properties:

APPEARANCE	**Light yellow liquid**
DENSITY, in g/cm3 at 15°C:	1.1
FLASH POINT, (PMCC) in °C:	N/A
pH, in conc. at 20°C:	8-9
pH, in 1% at 20°C:	7–8
COMPATIBILITY:	
Metal:	The product is compatible with all normally used metals and their alloys.
Rubber:	No known effect.
Synthetic rubber:	No known effect.

Features, Benefits and Applications

- Non-caustic, pH neutral.
- Solvent free
- Non-flammable.
- Does not contain nonyl phenol ethoxylates or otherestrogenic compounds.
- Non-corrosive to metals.
- Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon-freeing of tanks.
- Can be used for deodorizing.
- Complies with all environmental regulations and the EU Detergent Regulation
- IMO approved and listed in Annex 10 of the MEPC.2/ Circular

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-20-3018	22 Ltr.
	210 Ltr.

Slip Coat Hold Block Resist(RXSOL-22-2210)

INTRODUCTION :--

EMULSION BASED non reactive coating materials which makes thin film barrier on surface after dry. Due to formation of RXSOL THIN barrier film on surface, the cleaning operation after unloading becomes quicker and easier with optimum results.

RXSOL SLIP HOLDBLOCK is a Heavy Duty protective Solution for hold of vessels which carrying corrosive and / or messy cargos such as Sculpture, Salt, Petcock, coal and concentrates. It can be easily removed after discharging of cargo.

FEATURES AND BENEFITS:-

- Protects metal against corrosive cargo.
- Safe on all coatings, and to the personnel handling it.
- Protects paint against cargo penetration.
- Environmentally friendly .
- Safe to use in occupied / covered areas. Reduces turnaround times .
- Easy to Direct Spray.

Recommendation Dose for smooth surface : for Sulphur, Salt, etc 100 Liters/Hold for HANDYMAX & 150 Ltrs/Hold for PANAMAX

& for Petcock, Coal, etc 200 Ltrs/Hold for HANDYMAX & 250 Ltrs/Hold for PANAMAX

This materials can be use directly with low pressure machine or manually by garden spray pump. in general practice on smooth & clean surface each drums of 210 liters covers 2000 to 2500 sq meter while on rough and rusted surface require more quantities of materials. for HANDYMAX (5 Holds) : In general 500 Ltr to 1000 Ltr RXSOL-22-2210 require to cover area up to 12 meters , i.e. approx 1/2 drum to 1 drum of material is Sufficient for each hold, while

for PANAMAX (7 Holds): In general 1000 Ltr to 2000 Liters RXSOL-22-2210 require to cover full area. , i.e. approx 3/4 drum to 1.25 drums of material is sufficient for each hold.

This Emulsion is safe to use , But as a precaution goggles & Protective gloves with mask require before use of this materials.

Precaution:

- Deposition of previous cargo / Lime wash should be removed.
- Newly Painted surface should be fully cured.

Fore & Aft-Rx

Detergents

For cleaning of hard surfaces, such as decks, tanks, engine-rooms, etc. These two steps are followed:

Step 1: Spray directly on area to be cleaned

Step 2: With high pressure clean entire emulsified area

Due to high emulsification & penetration objects achieves optimal cleaning results.
Due to repulsion activity fore aft-Rx preventing dirt from reforming on the surface.

NOTE: Dry surface vastly absorb the chemical then wet surface so that apply detergent on dry surface where possible.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-20-3018	20 Ltr.
	25 Ltr.

COOLING WATER TREAT.

CORROSION INHIBITOR (with NITRITE CONTENT) ROCOR NB LIQ.(RXSOL-40-4001-020)

Liquid (For Radiators, DG - sets, Closed Cooling and chiller System)

Introduction:-

RXSOL-40-4001-020 is a unique formulation with organic Corrosion Inhibitors , Anti-Scalant for use in closed cooling water systems , for preventing corrosion and scale Formation in Internal combustion engines, compressor cooling system, DG -set at high or low temperature. It is a concentrated liquid ,also used as a corrosion inhibitor (Protects all the metals including cast iron , mild steel , copper .

Note:-The stable oxide film that is formed by RXSOL-40-4001-020 prevents corrosion caused by electrolytic action between dissimilar metals used in the system .RXSOL-40-4001-020 has been field tested and found to have no detrimental effects on non metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these system .

Application - SDG*Sets:- Internal combustion engines closed circuit cooling system compressor cooling system RXSOL-40-4001-020 incorporates superior corrosion inhibitors to prevent corrosion works by free of scale deposits.

Advantages:-

1. Prolong the life of equipment by keeping scale and corrosion free. Since RXSOL-40-4001 is alkaline and so will suppress acid corrosion, which would otherwise result in corrosion
2. damage such as pitting. However, the alkalinity control is such that even if the product is accidentally overdosed, the pH of the water will remain within limits. The metals which would be affected by extremes of alkalinity or acidity are protected.
3. Improves generating cooling efficiency by Maintaining a clean heat transfer
4. Corrosion protection by using superior corrosion
5. inhibitor.Reduced maintenance and down time
6. Compatible with Coolants / Antifreeze solution / Glycol .
7. Friendly with Metals (Like steel, Copper, Aluminum, all alloys) & Non-metal (Rubber, Hoses, Gasket etc.)
8.

Note:- In cases where systems are contaminated with oil and/or scale they should be cleaned before starting to apply RXSOL-40-4001-020 .There are suitable RX BRAND products to carry out the cleaning. Degreasing should be carried out using RXSOL SC 2002 and Descaling by using RXSOL DC 1008 .

Specification:-

Color	Clear / Pink (Color changes of the product cannot be excluded the effectively will however not impaired.)
Sp. Gravity	1.5 to 1.2
pH	Alkaline (11.3 - 11.8)
Odor	Slight
Boiling Point	100 degree C
Solubility	100% in water
Freezing Point	17 degree C

Handling:- RXSOL-40-4001-020 is an alkaline product & should be handled like other chemical Avoid contact with Eyes, Skin ,in case of contact ,wash with copious amounts of water immediately.

General Recommendation:-

Nitrite (as PPM NO2)	0	100-200	300-600	700-900	1100-1300	1440-2400
RXSOL-40-4001-020/1000L	13.0	11.3	8-10	5-7	1.5-3.5	0

Method Of Use:-

1. Properly clean the system with water and alkaline liquid if necessary.

2. Add 0 .15-1.5 % of RXSOL-40-4001-020 in system or recommended Nitrite level 1400 – 2500 ppm can be measured and controlled by any standard RXSOL test kit for Nitrite, Chloride test also helps to detect excess contamination to maintain accepted levels .when the product is dosed as recommended limit By buffering action of 1. Properly clean the system with water and alkaline liquid, if necessary.

3. Add 0 .15-1.5 % of RXSOL-40-4001-020 in system or recommended Nitrite level 1400 – 2500 ppm can be measured and controlled by any standard RXSOL test kit for Nitrite, Chloride test also helps to detect excess contamination to maintain accepted levels .when the product is dosed as recommended limit By buffering action of RXSOL-40-4001-020 , pH should be maintained between 8.3 and 10 by the treatment.

Note:-

Initial dosage for an untreated system is 9 liters of RXSOL-40-4001-020 / 1000 liters of untreated distilled water. This will bring the treatment up to the minimum level of 1000 ppm nitrite. For best result and prolonged engine life add RXSOL-40-4001 every 500 -6500 km. or 250 to 300 hours of running time or every 2 month interval .pH should be maintained between 8.3 and 10 by the treatment.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-40-4002	20 Ltr.
	25 Ltr.

Diesel Guard NB Pwd (RXSOL-40-4002-025)COOLING WATER TREAT CORROSION INHIBITOR (HIGH NITRITE CONTENT)RXSOL-40-4002 Powder (For Radiators, DG - sets, Closed Cooling System)

Introduction:-RXSOL-40-4002 is a dry powder, nitrite/borate based compound with unique formulation with organic Corrosion Inhibitors , Anti-Scalant for use in closed cooling water systems , for preventing corrosion and scale Formation in Internal combustion engines, compressor cooling system, DG - set at high or low temperature. It is also acts as a corrosion inhibitor (Protects all the metals including cast iron , mild steel , copper .)

Note:-The stable oxide film that is formed by RXSOL-40-4002 prevents corrosion caused by electrolytic action between dissimilar metals used in the system . RXSOL-40-4002 has been field tested and found to have no detrimental effects on non metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these' systems

Application-DG*Sets:-Internal combustion engines closed circuit cooling system compressor cooling system. RXSOL-40-4002 incorporates superior corrosion inhibitors to prevent corrosion works by free of scale deposits.

Advantages:-1.Prolong the life of equipment by keeping scale and corrosion free. Since RXSOL-40-4002 is alkaline and so will suppress acid corrosion, which would otherwise result in corrosion damage such as pitting. However, the alkalinity control is such that even if the product is accidentally overdosed, the pH of the water will remain within limits. The metals which would be affected by extremes of alkalinity or acidity are protected.
2.Improves generating cooling efficiency by maintaining a clean heat transfer
3.Corrosion protection by using superior corrosion inhibitor.
4.Reduced maintenance and down time
5.Compatible with Coolants / Antifreeze solution / Glycol
6.Friendly with Metals (Like steel, Copper, Aluminum, all alloys) & Non-metal (Rubber, Hoses, Gasket etc.)
Note:-In cases where systems are contaminated with oil and/or scale they should be cleaned before starting to apply RXSOL-40-4002 .There are suitable RX BRAND products to carry out the cleaning. Degreasing should be carried out using RXSOL SC 2002 and Descaling by using RXSOL DC 1008 .

Specification:

Color	**Off white powder**	**Rxsol-CWT-4002 is an alkaline product & should be handled like other chemical Avoid contact with Eyes, Skin ,in case of contact ,wash with copious amounts of water immediately.**				
pH	Alkaline (9)					
Odor	None.					
Nitrite (as PPM NO2)	0	100-200	300-600	700-900	1100-1300	1440-2400
RXSOL CWT 4001/1000L	2	2.5	2.0	2.0	1 -1.8	0

Method Of Use:-Properly clean the system with water and alkaline liquid , if necessary. Add 0 .05-0.2 % of RXSOL-40-4002 in system or recommended Nitrite level1400 – 2500 ppm can be measured and controlled by any standard RXSOL test kit for Nitrite, Chloride test also helps to detect excess contamination to maintain accepted levels. when the product is dosed as recommended limit By buffering action of RXSOL-40-4002 , pH should be maintained between 8.3 and 10 by the treatment.

Note:-Initial dosage for an untreated system is 2 Kg of RXSOL-40-4002 / 1000 liters of untreated distilled water. This will bring the treatment up to the minimum level of 1000 ppm nitrite. For best result and prolonged engine life add RXSOL-40-4002 every 500 - 6500 km. or 250 to 300 hours of running time or every 2 month interval.

Order no: **Packing**

Rxsol-40-4003 **20 Ltr.**

25 Ltr.

Fouling (by Micro – Organism) Preventing Agent

Biological Guard Liq.(RXSOL-40-4003)

Introduction:-

RXSOL-40-4003 is a very effective, amine based dispersing cleaner for the control of fouling by marine growth such as algae, shellfish , mussels, barnacles and micro-organisms and fungal growth in marine sea water cooling systems. Because of its molecular film forming properties, RXSOL-40-4003 is also acts as a corrosion inhibitor due to its film forming property .

Procedure Of Use:-

RXSOL-40-4003 can be used in both static and flowing systems. It should be preferably be started on a clean system from beginning stage since it is formulated to prevent growth rather than remove existing growth . (Existing Growth Can Be Clean By Using RXSOL DC 1008 / RXSOL SA 1008.) Note:- RXSOL BG 4003 Should Only Be Diluted With Fresh Water.

Dosage For sea water cooling systems:-

Dose 150 – 500 ML of RXSOL-40-4003 for every 100 tons of sea water flowing through the system per hour. The treatment should be applied daily when the vessel is on coastal waters. Normally the treatment is not required when sailing deep sea .

For ballast tanks Dose 1 liter of RXSOL-40-4003 per 10 tons of water prior to ballasting, followed by a monthly dose of 2 liters per 100 tons. For Trim Tanks, Oil Rig Sea Legs and Similar Systems Dose 25 liters of RXSOL-40-4003 per 100 tons of water. General Testing for bacteria can be done with our RXSOL Dip Slide Methods(Designed to check and see anytime anywhere invisible danger Bacteria / fungus grow from Cooling / Drinking water) which indicate the extent of the bacteriological contamination.

Characteristics:-

Appearance	Clear yellow liquid	VERY EFFECTIVE FOR THE CONTROL MUSSELS MICRO-ORGANISMS AND BIOLOGICAL GROWTH.
Density	In g/cm^3 at 1 5°C: 1.17	Liquid treatment which is easy to use.
Flash Point	Above 75°C	*Maintains heat transfer in systems. Reduces maintenance and down time. BIODEGRADABLE.*
Compatibility Metal	No known effect	
Rubber	No known effect	NOT suitable for drinking water.
Packaging	RXSOL-40-4003, 25 Ltr	No danger to marine life when used as recommended.

Characteristic sulfur odor

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-40-4012	25 Ltr.
	210 Ltr.

Product Description

Cooltreat is an organic liquid corrosion inhibitor with extended life for use in closed cooling water systems. This product offers protection for all commonly used materials in engine cooling water systems, including aluminum. Unlike other coolants, Cooltreat does not contain components subject to rapid depletion i.e. Nitrite and Silicate. Based on aliphatic acid technology Cooltreat is stable and hence the test frequency can be reduced. Cooltreat is fully organic and biodegradable.

Directions for Use

Cooltreat is a highly effective corrosion inhibitor for all common metals in cooling water systems. Testing has shown no detrimental effects on non metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these systems. Where most traditional inhibitors react with the metal surface and form oxides that prevent further corrosion, Cooltreat applies a thin and durable layer of protective molecules to the metal surfaces. This technology prevents the continuous build-up of insulating layers on heat transfer surfaces. For new builds, Rxsol Ships Service recommends cleaning of the water system before commencing service. The system will always contain small amounts of oil and iron oxides, and this can be removed in one operation. If the system is corroded or is more heavily contaminated, degreasing scale is recommended. For systems previously treated with other products, Rxsol Ships Service recommend to drain and flush the system before refilling with distilled water and Cooltreat . The system should be clean and free from scale and corrosion products when starting the treatment. The use of antifreeze is sometimes required if the vessel is to be laid up in cold areas, Cooltreat can be used in conjunction with glycols for frost protection. If used in conjunction with glycols, It is recommended to increase the product concentration to 8%.*

Dosing Method

Cooltreatshould be dosed to a suitable point in the system. If the expansion tank is used, adequate circulation must be assured.

Dosing and Control

Initial dosage for an untreated system is 60 litres of Cooltreat /ton of untreated distilled water (6%). This will provide sufficient protection of the system for a period of two to five years under normal conditions.6% Cooltreat should also be dosed in all make up water added to the system to compensate for lost coolant. The engine manufacturer's recommendations for water quality should always be complied with. Chloride levels should always be as low as possible. Most engine manufacturers recommend a maximum of 50 ppm chlorides. For this reason, Rxsol Service recommends the use of distilled water as make-up.

Product Properties:

APPEARANCE	Colorless liquid
Density, g/cm3 at 20°C:	1.055
pH	8.2
COMPATIBILITY	
Metal	All commonly used
Rubber	No known effect

Features, Benefits and Applications

- Liquid product, easy to use
- Environmentally friendly, fully organic product, low toxicity
- Effective against cavitation and erosion. Superior heat transfer properties
- Compatible with hoses, gaskets and seals
- Compatible with glycols for frost protection
- Stable product-non depleting
- The product can be used for corrosion inhibition in many types of closed re-circulation system cooling water systems
- Approved by major engine manufacturers

Order no:	Packing
Rxsol-40-4016	20 Ltr.
	25 Ltr.

Product Description

Cat ELC meets or exceeds the requirements of the following speacifications and guidelines: RXSOL ELC

- Factory-Fill—Used as standard factory-fill for all Cat machine cooling systems.
- Lower Maintenance Costs—Reduces engine coolant and additive costs by as much as 500% compared to conventional coolants. It eliminates the need for supplemental coolant
- additives, extends coolant change-out intervals and reduces disposal requirements.
- Advanced Metal Protection—Incorporates an advanced formula technology with organic
- acid additive corrosion inhibitors, such as a combination of mono and dicarboxylates for maximum protection of copper, solder, brass, steel, cast iron and aluminum.

Product properties:

Boiling protection with 15 psi (1 bar) radiator cap **50% Cat ELC/50% water** **60% Cat ELC/40% water (RXSOL ELC concentrate added)**	**129°C (265°F)** **132°C (270°F)**
Freezing protection **50% Cat ELC/50% water** **60% Cat ELC/40% water (ELC concentrate added**	-37°C (-34°F) -52°C (-62°F)
Nitrite (50% solution)	500 ppm
Molybdate (50% solution)	530 ppm

Order no:	Packing
Rxsol-40-4002	20 Ltr.
	25 Ltr.

RXSOL Antifreeze Corrosion Inhibitor

Introduction

Very effective blend of GLYCOL classified chemicals along with CORROSION inhibitor to protects all engineering precious metal including aluminum. Its chemically treated layer protects radiators and engines, against rust and corrosion. Its proper dose in Cooling System gives full protection from corrosion.It is biodegradable and does not present an environmental problem.

Solution Strength:-

25 Ltr RXSOL-16-4020: 75 Ltr Water gives freezing protection up to -14^{0}C"or" 25% solution (1 part anti-freeze to 3 parts water)For extra cold / winter climate, increase to a 33% solution (1 part anti-freeze to 2 parts water) to give freezing protection down to -17^{0}C.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-40-4002	20 Ltr.
	25 Ltr.

DIESEL COOLING WATER CORROSION

INHIBITOR RXSOL-40-2000

Introduction:-

RXSOL-40-2000 a unique formulation with organic Corrosion Inhibitors , Anti-Scalant for use in closed cooling water systems , for preventing corrosion and scale Formation in Internal combustion engines, compressor cooling system, DG -set at high or low temperature. It is a concentrated liquid , also used as a corrosion inhibitor (Protects all the metals including cast iron , mild steel , copper.

Note:-

The stable oxide film that is formed by **RXSOL-40-2000** prevents corrosion caused by electrolytic action between dissimilar metals used in the system . **RXSOL-40-2000** has been field tested and found to have no detrimental effects on non metallic substances such as seals, glands, packing, hoses, gaskets etc., normally used in these' systems.

Applications-DG*Sets:-

Internal combustion engines closed circuit cooling system compressor cooling system. RXSOL-40-2000 incorporates superior corrosion inhibitors to prevent corrosion works by free of scale deposits.

Advantages: -

1. Prolong the life of equipment by keeping scale and corrosion free. Since RXSOL-40-2000 isalkaline and so will suppress acid corrosion, which would otherwise result in corrosion damage such as pitting. However, the alkalinity control is such that even if the product is accidentally overdosed, the pH of the water will remain within limits. The metals which would be affected by extremes of alkalinity or acidity are protected.
2. Improves generating cooling efficiency by maintaining a clean heat transfer
3. Corrosion protection by using superior corrosion inhibitor.
4. Reduced maintenance and down time
5. Compatible with Coolants / Antifreeze solution / Glycol .
6. Friendly with Metals (Like steel, Copper, Aluminum, all alloys) & Non-metal (Rubber, Hoses, Gasket etc.)

Note :- In cases where systems are contaminated with oil and/or scale they should be cleaned before starting to apply RXSOL-40-2000 .There are suitable RX BRAND products to carry out the cleaning. Degreasing should be carried out using RXSOL SC 2002 and Descaling by using RXSOL DC 1008 .

SPECIFICATION / HANDLING

Color Pink/ red (Color changes of the product can not be excluded the effectively will however not impaired.)

Sp. Gravity	
pH	
Freezing Point	17 0 c
Odor	1.1 to 1.25
Alkaline	(11.3 – 11.5)

None:-

RXSOL-40-2000 is an alkaline product & should be handled like other chemical Avoid contact with Eyes, Skin ,in case of contact ,wash with copious amounts of water immediately.

DIESEL COOLING WATER CORROSION INHIBITOR

RXSOL-40-2000Nitrite (as PPM NO2)0 100-200 300-600 700-900 1100-1300 1440-2400 RXSOL-40-2000 /1000L 13.0 11.3 8-10 5-7 1.5-3.5 0

Method Of Use:-1. Properly clean the system with water and alkaline liquid , if necessary. 2. Add 0 .15-1.5 % of RXSOL-40-2000 in system or recommended Nitrite level 1400 – 2500 ppm can be measured and controlled by any standard RXSOL test kit for Nitrite, Chloride test also helps to detect excess contamination to maintain accepted levels . when the product is dosed as recommended limit By buffering action of RXSOL-40-2000 , pH should be maintained between 8.3 and 10 by the treatment.

Note:- Initial dosage for an untreated system is 9 litres of RXSOL 2000 / 1000 litres of untreated distilled water. This will bring the treatment up to the minimum level of 1000 ppm nitrite. For best result and prolonged engine life add RXSOL-40-2000 every 500 -6500 km. or 250 to 300 hours of running time or every 2 month interval .

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-40-4010	20 Ltr.
	25 Ltr.

Description

RXSOL LIQUID EWT cooling water treatment is a nitrite-based, liquid, multi-functional corrosion inhibitor for protecting recalculating cooling and heating water systems. RXSOL LIQUID EWT treatment is an excellent treatment for diesel engine primary and secondary cooling water. It is also ideally suited for use in chilled water systems because it forms a clear, non-staining solution, which protects the system from corrosion and hard water scale. RXSOL LIQUID EWT treatment is approved or authorized for use by:

Features	Benefits
Effective corrosion inhibitor	Protects ferrous and non-ferrous metals Minimizes metal oxide deposits
Contains a scale modifier	Maintains heat transfer effectiveness Helps prevent overheating caused by sludge and mineral scale deposits Reduces cleaning and maintenance costs
Liquid	Easy to dose Cost effective
Buffered	Stabilizes cooling water pH

Application and Use

System Preparation

RXSOL LIQUID EWT treatment is an effective corrosion inhibitor for ferrous metals in marine circulating cooling water systems. Because certain aluminum alloys are highly anodic, they may be difficult to completely protect. Therefore, the use of RXSOL LIQUID EWT treatment with systems containing aluminum alloys should be discussed with a local Rxmarine Marine representative prior to starting treatment. In order to ensure the maximum benefits from a RXSOL LIQUID EWT treatment program, the system should be inspected for deposits and corrosion. If the system is found to be contaminated, it must be chemically cleaned before the treatment program begins. Your Rx Marine representative can provide specific cleaning recommendations. Sacrificial anodes (magnesium or zinc) in the cooling system should be removed prior to adding RXSOL LIQUID EWT treatment. These materials are not necessary with the complete chemical program in effect and, in fact, may cause undesirable deposits in circulating water systems.

Dosage

The system should be filled with good quality fresh or distilled water and where freeze protection is necessary, the proper amount of glycol-based antifreeze should be added. Begin circulating the system water, and add RXSOL LIQUID EWT cooling water treatment at an initial dosage of 8 liters per ton of system water capacity. Circulate for 30 minutes after addition to ensure good distribution and the establishment of a protective film. RXSOL LIQUID EWT cooling water treatment may be used with waters that have hardness contamination, provided the total hardness levels are less than 170 ppm or as otherwise recommended by the engine manufacturer, whichever is less. The chloride level in the cooling system should be limited to 100 ppm or as otherwise recommended by the engine manufacturer, whichever is less.

Product Properties

Appearance	Light yellow liquid
Specific Gravity at 25° C (77° F)	1.23
Flash Point (PMCC)	None
pH, Neat	12.3 - 12.9
Freeze Point:	-12.2° C (10° F)
Freeze/Thaw Stability	Complete

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-50-5001 **20 Ltr.**

25 Ltr.

BOILER WATER TREATMENT

UNIVERSAL–ONE SHOT (RXSOL-50-5001)

Product Description:-RXSOL-50-5001 is a well-balanced blend for boiler water treatment, resulting in a scale and corrosion control by one simple operation.

Function Mechanism:

Alkalinity Control:-This components of RXSOL-50-5001-020 chemically precipitate the hardness of salts like Calcium & Magnesium & neutralizes the acidic conditions.Hardness Control:-RXSOL-50-5001provides phosphate reserve to effectively react with and precipitate the hardness salts introduces with the feed water.Sludge Conditioner:-RXSOL-50-5001 component will preventing the sludge from adhering to metals surfaces. Boiler sludge can only be removed by blow down.

Oxygen Scanvangers:-Catalyzed liquid of RXSOL-50-5001 controls the formation of oxygen to protects boiler & steam line corrosion protection. As an additional benefits it will assist to neutralize dissolved carbon dioxide. In this way RXSOL-50-5001 preventing oxygen "Pitting" corrosion.

Application , Dosage:- RXSOL-50-5001is strongly alkaline. RXSOL-50-5001 is best applied neat or diluted with any con –venient strength on a continuous basis using a suitable chemicals pump . The product should be applied to the boiler feed tank or feed line to ensure adequate mixing. The dosage rate of RXSOL-50-5001 is dependent on boiler operating condition, Feed 2-3 Ltrs of RXSOL-50-5001solution for per thousand Ltr of boilers water Then control the system by Periodic Alkalinity test procedure. If p-Alkalinity is below 200 ppm increase the ratio of RXSOL-50-5001solution. If p-Alkalinity is above 400 ppm reduce the concentration of RXSOL-50-5001solution by dilution with water.

Control Procedure:- Control is by simple boiler water tests or RX CLEANSERS can provide a suitable test kits for this purpose.

Product Properties:-

Appearance	**Clear liquid**
Density	n g/cm3 at 15°C: 1.1±0.02
Solubility In Water	Complete
pH (1 Vol %)	>13
Compatibility	
Metal	Corrosive to aluminum, magnesium, zinc and tin.
Rubber	No known effect.
Packaging	Size (in liters) : As per demand.

Characteristics:-

- Convenient liquid treatment, which provides the basic alkalinity on which successful water treatment depends.
- Provides optimum conditions for hardness control to function.
- Neutralizes acid conditions.
- Will assist in keeping silica in suspension.
- Simple test to determine level of treatment.
- Can be used in boilers of all pressures.
- Can be used as a neutralizer after acid cleaning operations.

Packaging, Handling, First Aid & Storage:-RXSOL-50-5001-020 is generally supplied in drums containing 25 / 210 Ltrs. Avoid contact with skin and eyes wear goggles & PVC gloves when handling. Keep an eye wash bottle close to the point of use. Do not take internally.On contact with Skin/Cloth, wash immediately with cupious amount of water. If eyes are affected they should be washed with water for at least 15 Minutes and medical attention sought immediately. If swallowed do not induces vomiting give plenty of water and call doctor immediately.

****Keep drums tightly closed when not in use.****

Order no:	Packing
Rxsol-50-5003	20 Ltr.
	25 Ltr.

Directions for use

Boiler Coagulant prevents the formation of deposits on boiler internal surfaces. Sludge is kept dispersed in small particles and conditioned to be removed by normal blow down. In this way tube overheating due to deposits is avoided. The treatment is primarily used in conjunction with Hardness Control, but also with other Rxsol chemical treatments. Boiler Coagulant can also be used where minor oil contamination has been experienced, the oil being required to be coagulated for removal by blow down. However, it must be noted that if oil contamination is continuous and excessive, off-line cleaning will be required. The source of oil contamination must be stopped immediately.

Dosing method

For optimum results dose Boiler Coagulant directly to the boiler via the bypass pot-feeder. Boiler Coagulant is compatible with any Rxsol Boiler Water Treatment and dosing can be combined. Dosage and control The initial dosage is 20 ml of treatment daily for every ton of boiler capacity. Daily bottom blow down is required when using Boiler Coagulant.

Features

- Liquid product, easy to feed.
- Prevents the formation of adherent deposits and sledges in boilers.
- Keeps sludge dispersed for efficient removal by blow down.
- Keeps boilers clean and extends boiler operational time between cleaning.
- Used in conjunction with any products in Rxsol range of boiler water treatments.
- Used to coagulate small amounts of oil which have contaminated the boiler water.

Product Properties:

Appearance	LIQUID
Color	AMBER
AMBER	9
Density	1.2

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-50-500	20 Ltr.
	25 Ltr.

Alkalinity Control (RXSOL-50-500)

Application:- RXSOL-50-500 provides the alkaline condition for hardness control to function correctly. Without the correct precipitation and subsequent blow down of hardness salt, scale would form. This would result in restriction in water flow, ineffective heat transfer and local corrosion. The end effect would be an inefficient boiler and ultimately component failure. RXSOL-50-500 also provides the alkaline condition required for corrosion control, by neutralization of acidic gases

Dose:- For optimum results dose RXSOL-50-500 direct to the boiler with a RXSOL Boiler Water Treatment Dosing unit, or via the bypass pot- feeder installed in the boiler feed line. Required dosage can be controlled by pH & alkalinity test dosage chart . One (1) milliliter of RXSOL-50-500 concentrated alkaline liquid per ton of distilled water provides 0.5 ppm of alkalinity hydrate.

Note:- It can also be used as a neutralizing agent following acid cleaning with Descaling materials (RXSOL-11-1008--DC Descaling Liq. / RXSOL-54-1008-SA Safe Acid PWD)

Description:- RXSOL-50-500 is a concentrated liquid alkaline product for corrosion and Calcium scale control in boilers. Suitable for low-pressure boiler systems (0-32 bar) , medium-pressure steam propulsion vessels (32-60 bar). And also suitable to used for high pressure steam generating systems (60-84 bar).

Mechanism It converts calcium hardness into soft, non-adherent sludge that is easily removed by blow down.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-50-500	20 Ltr.
	25 Ltr.

BOILER WATER TREATMENT

Product Description:-RXSOL-50-5004 is a well-balanced blend of several powder for boiler water treatment, resulting in a scale and corrosion control by one simple operation.

Alkalinity Control:-This components of RXSOL-50-5004 chemically precipitate the hardness of salts like Calcium & Magnesium & neutralizes the acidic conditions.

Hardness Control:-RXSOL-50-5004 provides phosphate reserve to effectively react with and precipitate the hardness salts introduces with the feed water.

Sludge Conditioner:-RXSOL-50-5004component will preventing the sludge from adhering to metals surfaces. Boiler sludge can only be removed by blow down.

Oxygen Scavenger:-Catalyzed of RXSOL-50-5004 controls the formation of oxygen to protects boiler & steam line corrosion protection. As an additional benefits it will assist to neutralize dissolved carbon dioxide. In this way RXSOL-50-5004 preventing oxygen "Pitting" corrosion.

Applications, Dosage:-RXSOL-50-5004 is strongly alkaline. RXSOL-50-5004 is best applied diluted with WATER , any convenient strength on a continuous basis using a suitable chemicals pump . The product should be applied to the boiler feed tank or feed line to ensure adequate mixing. The dosage rate of RXSOL-50-5004 is dependent on boiler operating condition, Feed 1 Kg of RXSOL-50-5004solution for per thousand Ltr of boilers water Then control the system by Periodic Alkalinity test procedure. If p-Alkalinity is below 200 ppm increase the ratio of RXSOL-50-5004 solution. If p-Alkalinity is above 400 ppm reduce the concentration of RXSOL-50-5004 solution by dilution with water.

Control Procedure:-Control is by simple boiler water Tests or RX CLEANSERS can provide a suitable test kits for this purpose

Properties:-

Appearance	**Clear liquid**
Solubility In Water	Complete
pH (1 Vol %)	-13
Capability	
Metal	Corrosive to aluminum, magnesium, zinc and tin.
Rubber	No known effect.
Packaging	Product Size (in Kg)

Characteristics:-

• Convenient treatment, which provides the basic alkalinity on which successful water treatment depends.
• Provides optimum conditions for hardness control to function.
• Neutralizes acid conditions.

• Will assist in keeping silica in suspension.
• Simple test to determine level of treatment.
• Can be used in boilers of all pressures.
• Can be used as a neutralizer after acid cleaning operations
• Suitable for use with all auxiliary boilers; waste heat units; economizers, package boilers, smoke and water tube boilers.
• Dispersant action suspends sludge and sediment particles for efficient blow down.

• Oxygen scavenging for optimum protection.
• Protects boiler, steam lines, condensate lines and feed water lines from corrosion .

• Fast action due to catalyst .

• Simple test to determine level of treatment .

Packaging, Handling, First Aid & Storage:-RXSOL-50-5004 is generally supplied in drums containing 25 Kg/50 Kg barrel . Avoid contact with skin and eyes wear goggles & PVC gloves when handling. Keep an eye wash bottle close to the point of use. Do not take internally. On contact with Skin/Cloth, wash immediately with copious amount of water. If eyes are affected they should be washed with water for at least 15 Minutes and medical attention sought immediately. If swallowed do not induces vomiting give plenty of water and call doctor immediately. ****Keep drums tightly closed when not in use.**

Order no:	Packing
Rxsol-50-500	20 Ltr.
	25 Ltr.

Condensate Corrosion Control

(Boiler Systems)(RXSOL-50-5005)

(Condensnol Amine)

Product Description:-A water soluble volatile concentrate amine based liquid treated for the really corrosion control and as a neutralizing agent for condensate and feed water systems of industrial and institutional physical plants. Also very good organic oxygen scavenger and very Effective under all operating conditions , Protects boiler surfaces by forming an iron ternate film.

Fields Of Application:-

RXSOL-50-5005 is an effective neutralizing type corrosion inhibitor & oxygen scavenger for steam condensation system. And can also be used to protect Boilers /Metals surfaces form corrosion. It removes oxygen efficiently in open feed systems and gives effective corrosion inhibition of boiler/exhaust gas economizer system surfaces . Its Chemical reaction by converting Fe2O3 (rust) to organic iron compound protect further IRON rust reaction .

Operating Process:-RXSOL-CC72 neutralizes the acid components of feed water. The proportion of RXSOL-50-5005 depends upon the Carbon dioxide content of the condensate. Basically RXSOL-50-5005 neutralizes the acid contents & maintains the condensate and feed water in the alkaline condition. It also protects copper based metals.

Dosage And Control:-The necessary amount of RXSOL-50-5005 is required or injected as frequently as to maintain the pH of the condensate at the main condensate pump outlet between 8.6-9.5 . The amines pass over with the steam and have the dual function of elevating the pH of the steam/condensate and putting a protective micro film on the system pipe work. Acidic condensate is the result of carbonic acid (H2CO3) being formed as CO2 is released in the steam. Condensate prevents corrosion by carbonic acid on live systems. Its filming properties also reduce corrosion on shut down lines, when moisture and oxygen are present.

Condensate Dosage Parameters:-

	Less than 8.3	Standard 8.3-9.5 Range	Over 9.5	Standard pH Range
All Boiler groups	Increase Dosage By 25% for 72 hours and Retest	Satisfactory Maintain Dosage	Decrease Dosage By 25% for 72 hours and Retest	8.3-9.5

These are recommended values based on experience and are in no way intended to replace the boiler manufacturer's specifications or company regulations.

Product Properties:-

Appearance	**Colorless Liquid-Light Yellow**	
Density	In g/cm3 at 15°C: 1.0	
Odor	Amine	
Flash Point	(PMCC) °: None	
pH	Alkaline	
Compatibility		
Metal	Avoid Copper, Brass, Aluminum	
Rubber	No known effect	
Packaging	ORDER NO :-RXSOL-50-5005	Size (in liters) 25/35

Characteristics:-

Easy to use liquid treatment.

Neutralizes the acids occurring in the condensate system.

Less maintenance required. Lower operating costs and increased reliability.

Volatilizes and carries over with the steam and so is recycled. Dosage is economical and efficient.

Simple test to determine level of treatment.

Used for protection of condensate and feed water systems in boiler systems of all pressures.

Precautionary Information:-

RXSOL-50-5005 alkaline and the vapors are irritating to eyes and lungs. Avoid contact with eyes and skin. Do not take internally. Observe safety regulations wear Goggles, PVC gloves and Apron when handling Provide ample ventilation Avoid contact with skin in case of contacts wash with copious amount of water immediately. If eyes are splashed give immediate and prolonged irrigation with clean running water and obtain medical attention.

Not for internal use :-

If swallowed do not induce vomiting give plenty of water or milk and call a doctor immediately.
PACKING:-RXSOL-50-5005 is available in 25/35 Liters

Packing. GENERAL REMARKS:-Do not store RXSOL-50-5005 near a heating equipment.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-50-5006	20 Ltr.
	25 Ltr.

Hardness Control - I (RXSOL-50-5006)

Product - Description:- RXSOL-50-5006 is a superior Heavy duty and highly concentrated water based alkaline cleaner, containing specially selected detergents and powerful long chain organic syndet , specific salts with surfactants & wetting agents . It is low toxic product with an exceptional solvency power on soil & oily matter & having good foaming qualities. It is free from Hydrocarbon solvents , Biodegradable and minimizes the extreme hazards to personnel in handling materials . Also suitable for TANK CLEANING . It can be used as a general purpose cleaner to remove oil and grease deposits .

Using Procedure:-First of all flush the system with cold water to prevent evaporation rates and polymerization then the most economical method of using **RXSOL-50-5006** is by direct injection followed by recirculation washing, using tank cleaning machines. Spraying method: Directly spray on the contaminated area and let it act for 5-10 minutes. Then clean the system under high pressure. A solution of 5-10% in fresh water can be used for this purpose also , and may be sprayed on and hosed off using high pressure. Circulation method :Cleaning the oil side of tank can be cleaned by circulating through with **RXSOL-50-5006**Rock and Roll method: fill the tank with water (fresh or sea) up to 25 - 30% of its volume then 5–20% (Depend on contamination) **RXSOL-50-5006** will add , let it stand for approximately 12-24 hours. Then fill with more water to 90% of the tank's capacity. This way the tank will be cleaned by natural agitation due to wave motion. Let for a few days, then drain the tank and ballast-deballast 2-3 times in order to achieve complete and thorough rinse off.

ProductProperties:-Appearance Pale yellow liquid Handling Although this product is not dangerous but avoid contact with eye, naked skin, (wounded) incase contact wash with copious amount of water immediately. NOT FOR INTERNAL USE. Density In g/cm3 at 15°C: 1.01 First Aid Measure Compatibility Ingestion Induce vomiting and seek medical attention.

Metal No Known Effect Inhalation	Remove to fresh air
Rubber No known effect Eye Contact	Flush with water at least for 15 min.
pH Alkaline Note	Acts as an acid-neutralizing agent.
Solubility	Infinite in water It is fresh water and seawater soluble.

PACKAGING RXSOL-50-5006:- Effectively dissolves all fat, vegetable and animal oil. 210 LTRS

Characteristics:-

- Removes grease, oil, carbon deposits, soil and grime.
- Keeps loosened deposits in suspension preventing re-deposition.
- Low toxic. , Non-flammable.
- Free from hydrocarbon solvents.
- Effective and economical in use , Water-based cleaner.
- **RXSOL-50-5006** has numerous cleaning applications including removal of greases, waxes, oil, sludge, soot, carbon deposits and general dirt and grime.
- Non-corrosive to ferrous metals. Suitable for all tank-coatings.
- Can be used for gas and hydrocarbon freeing of tanks.
- Can be used for deodorizing
- Contains wetting agents.
- Suitable for accommodation cleaning of woodwork, leather, desks, etc.
- Suitable for cleaning of toilets and showers.
- Suitable for cleaning of reefer boxes.
- Can be used for cleaning of windows and portholes. Also used for cleaning of dishes.
- Can be used for cleaning of hospitals.
- Can be used for hand laundry cleaning.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-50-5007	25 Ltr.
	210 Ltr.

Oxygen Scavanger(RXSOL-50-5007)

Introduction:-

RXSOL-50-5007 corrosion inhibitor is a catalyzed liquid oxygen scavenger , This formulation is especially effective way of protecting ferrous and aluminum metals from corrosion due to adverse environmental conditions such as high heat and humidity, seawater or other harsh environments , for boiler and steam line corrosion protection. As an additional benefit it will assist to neutralize dissolved cabon dioxide. It provides the required condition for the estabishment of a pasivity layer (magnetite) in the boiler and condensate system.

Dose:-

RXSOL-50-5007 The objective is to maintain a hydrazine residual between 0.05-0.2 ppm depending on operating pressure and boiler designe. Actual consumption is determined under operating conditions. A normal dosage is approximately 1 ltr. per day, depending of system layout.

Powder Application:-

For average conditions the recommended dosage is 0.30 ounces (weight) per cubic foot (28 Liters) of enclosed space.(300 g/cubic meter) Concentration can be increased to protect metals under more severe conditions. Powder is applied by air fogging or sprinkle and then the treated area is closed or sealed.

Liquid Application:-

For average conditions the recommended dosage as a solution is a 0.25% in water (based upon weight). This solution is recommended as a hydrostatic test fluid or as an additive to a final rinse in metalworking applications. Concentration can be increased to protect metals under more severe conditions. The treated area is then closed or sealed.

Products Properties:-

- Non-Flammable
- Safe Plant Handling
- Low Odor
- Provides corrosion protection in the liquid and the vapor phase
- When used in hydrostatic testing the product provides protection in liquids below, above and at the liquid levels
- Protection of recessed and hard to reach areas. Complicated valves and the interior surfaces of piping and equipment, which are often difficult or impossible to reach, are protected with true Vapor Corrosion Inhibitor action Easy to Useits

- POWDER can be applied by either blowing with conventional air blasting equipment or other methods using compressed air . Can be applied by sprinkling , rinsing or dipping metals in a solution of RXSOL-50-5007 , hydrotest solution, metalworking fluids, coatings, adhesives and water treatment formulations.

PACKAGING : 25 ltrs. / 210 Ltrs.
ACTIVE MATTER : 78-83%
COMMON NAME : Oxygen control corroision inhibito for FEROUS & ALUMINUM

Order no:	Packing
Rxsol-50-5007	20 Ltr.
	25 Ltr.

Oxygen Scavenger Plus(RXSOL-50-5007)

Oxygen Scavenger Plus is a catalyzed liquid solution of Hydrazine and diethyl hydroxylamine (DEHA). Its volatile properties ensure distribution throughout the boiler and condensate system, and hence protects against oxygen corrosion in all parts of the system. The product also provides the required conditions for the establishment of a passivating layer of magnetite on all inner surfaces. RXSOL-50-5007 is a low toxicity product, suitable for high, medium and low pressure boiler systems.

Product Specifications:

Density	**1**
Packing, Type	PLASTIC
Volume	25 l
pH	10.5
Color	LIGHT YELLOW
Appearance	LIQUID

Directions for use:-

This product is formulated for use in conjunction. Oxygen Scavenger Plus can be used in any boiler system, and in conjunction with mechanical desecration systems. Removal of dissolved oxygen is vital for prevention of corrosion and especially pitting corrosion in boilers. When dosed into a boiler system, Oxygen Scavenger Plus will react with dissolved oxygen and form non corrosive compounds. The product is volatile, and left over product from oxygen scavenging in the pre-boiler section will evaporate and assist protection of the steam and condensate system. No solid materials are produced when using Oxygen Scavenger Plus.

Dosing method

Rx Marine International recommends continuously into the boiler feed line and Boiler Water Treatment Dosing Unit. Dosing should be controlled so that the DEHA residual in the condensate is between 0.08-0,30 ppm. The consumption will depend on feed water temperature and the amount of water fed into the boiler. For more information about initial dosage and dose rate please consult your nearest Customer Centre.

Test result condensate PPM DEHA 0.00 - 0.08 0.08 - 0.30 0.30 +Increase dose 25% Maintain dose Decrease dose 25% Sampling and testing

A representative sample of Condensate should be drawn for analysis daily. The sample should always be taken from the same sampling point, cooled and tested immediately By Rxsol Test Kit. It is important that regular testing is carried out, to ensure the correct level of treatment is maintained.

Features

- Fast acting, liquid oxygen scavenger.
- Safe and easy to use, low toxicity.
- Reduces corrosion of iron and copper, increasing system life and reliability.
- Neutralizes acids occurring in condensate system.
- Volatile product, provides distribution and protection throughout the boiler system, economical in use.
- Suitable for use in conjunction with combined and co-ordinated treatment programmes.
- Organic product, no dissolved solids added.
- Simple test to determine treatment level.

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-50-5008	20 Ltr.
	25 Ltr.

Cat. Sulphite Liquid (RXSOL CAT SULPHITE LIQUID) is a sodium sulphite based product in ready to use liquid form. The catalyst ensures rapid elimination of oxygen in the boiler system. RXSOL CAT SULPHITE LIQUID should be used in conjunction with the other Rxsol boiler water treatment products. Oxygen is highly corrosive in the boiler system, even in small amounts. Elevated temperature operation of the hot well is a good practice to remove gases like oxygen. Even so, the feed water contains oxygen which can create severe corrosion, shown as deep and local pitting. This will quickly cause failure of the boiler metal. RXSOL CAT SULPHITE LIQUID reacts with oxygen to form inert sodium sulphate, thus preventing oxygen attack.

Directions for use

RXSOL CAT SULPHITE LIQUID is a fast acting oxygen scavenger for use in ships boiler system in conjunction with other Rxsol boiler water treatment products. High feed water temperature should be maintained for optimum product performance, reduced product consumption and optimum system protection.

Dosing method

For optional results RXSOL CAT SULPHITE LIQUID should be dosed continuously by means of a metering pump into the feed line, after the recirculation valve. RXSOL CAT SULPHITE LIQUID can be fed using Rxsol BWT dosing system. Slug dosing into the hot well as well as low hot well temperatures will strongly reduce the efficiency of this treatment.

RXSOL CAT SULPHITE LIQUID should be dosed separately from other boiler water treatments.

Dosage and control

The quantity of RXSOL CAT SULPHITE LIQUID required depends on the operation of the boiler system. As a guide 10 ppm sulphite is required to react with 1 ppm oxygen.

A reserve of 20 to 50 ppm sulphite is to be maintained in the boiler water, determined by regular testing. A normal dosage is approximately 1 Ltr per day, depending on system layout.

Product Properties:

Appearance	LIQUID
Color	PALE PINK
pH	4

Features

- Concentrated liquid product.
- Protects the boiler from oxygen corrosion.
- Catalyzed product for very rapid action.
- Reacts at low temperature.
- Will assist mechanical desecration.
- Simple control test.
- Should be used in conjunction with other Rxsol treatments.

Order no:	Packing
Rxsol-50-5020	20 Ltr.
	25 Ltr.

Directions for use

Autotreat is a boiler water conditioner designed for optimum protection of ships boiler systems when used in conjunction with Oxygen Scavenger Plus. The product combines well known phosphate treatment with new polymer technology. This ensures that precipitates are kept soft and no adherent for easy removal by blow down. The product should always be used in conjunction with an oxygen scavenger, preferably Rxsol Oxygen Scavenger Plus. Note that this product is formulated for use in conjunction with good quality feed water.

Directions for use

Autotreat is a boiler water conditioner designed for optimum protection of ships boiler systems when used in conjunction with Oxygen Scavenger Plus. The product combines well known phosphate treatment with new polymer technology. This ensures that precipitates are kept soft and no adherent for easy removal by blow down.

The product should always be used in conjunction with an oxygen scavenger, preferably Rxsol Oxygen Scavenger Plus. Note that this product is formulated for use in conjunction with good quality feed water.

Dosing method

The product should preferably be dosed continuously with a Rxsol Boiler Water Treatment Dosing Unit. Alternatively the product can be fed into the feed line by means of a by-pass pot feeder.

Dosage and control

Minimum dosage is 1.2 liters of Autotreat/ton of boiler capacity to reach a P-Alkalinity level of 100 ppm. For an untreated system it is recommended to initially bring the treatment up to a suitable level of 200 ppm p-Alkalinity. The dosage chart given below is for convenience to determine the amount of product required to elevate P-Alkalinity. Note that the table is based on reaching 200 ppm. P-Alkalinity.

Sampling and testing

A representative sample of boiler water should be drawn for analysis daily. The sample should always be taken from the same point after blow down, cooled and tested immediately. Follow the Spectrapak Test Kit instructions and log the results. It is important that regular testing is carried out to ensure that treatment levels are correct.

Features

- Liquid boiler water treatment chemical for simplified dosing and handling.
- Suitable for all boilers, up to 30 Bar pressure.
- Prevents scaling and corrosion, increasing system life and reliability.
- Contains volatile amines to neutralize acids occurring in condensate system.
- Dispersant action suspends sludge and sediment particles for efficient removal by blow down.
- Suitable for dosing with Rxsol Boiler Water Treatment Dosing Unit.
- Keeps boiler tube surfaces clean, promoting the best heat transfer conditions, saving energy.
- Simple testing to determine treatment level.

Order no: **Packing**

Rxsol-51-6001 **20 Ltr.**

25 Ltr.

Evaporator Treatment Liquid (RXSOL-51-6001)
Vapour Treatment (For controlling of Scale & Foam)

Introduction: RXSOL-51-6001 is a concentrated solution of a POLYELECTROLYTE polymer and antifoaming agents for use in SEA WATER evaporator as a controller of scale and foam in side the evaporators. It can be used as a scale inhibitor in the feed water to EVAPORATORS producing fresh water .

Procedure Of Use and Dose Rates: POLYELECTROLYTE polymer of RXSOL-51-6001 reacts with the potential scale forming salts in the water to prevent them from adhering to heat transfer surfaces. These solids are held in suspension and easily removed from the evaporator line .Finally RXSOL-51-6001 also have deforming properties by which will stop foaming in EVAPORATOR. And by that way Distilled water quality is maintained inside the EVAPORATOR.

Dosage :

Daily Out Put Evaporator	Daily RXSOL VT 6001 Requirement
10 - 20 MT	100-200 ML
30 – 40 MT	300-400 ML
50 – 60 MT	500-600

Setting the Flow Rate: The treatment is added to the dosage tank and mixed with water. Example: With the 0.5 liters of Vaptreat add sufficient water to make up 50 liters of liquid. The standard flow meter is Adjustable-Rate=0-l00ml/minute. Flow rate calculation: Flow rate = 50 Liters/24 x 60= 35 ml/min setting i.e. This will last 24 hours.

Note: We can remover existing mineral scale deposits by using A 5-10% solution of RXSOL-51-6001

Characteristics

Appearance Thermal Firmness	Clear yellow liquid 250° C	By keeping heat transfer surfaces free of scale, Ensures that the evaporator works at maximum efficiency.
Density	In g/cm3 at 15°C: 1.1	Permits more efficient evaporation.
pH (1 Vol%)	9	Reduces downtime and maintenance costs.
Compatibility		Concentrated, safe liquid, easy and economical dosing.
Metal	No known effect	For use in both high pressure and vacuum evaporators
Rubber	No known effect	The antifoaming properties ensure that distillate quality is high
Packaging	20 / 25 Ltr	Improves the quality of distilled water

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-32-3104	20 Ltr.
	25 Ltr.

Directions for use

Potable Water Stabilizer effectively and economically provides scale and corrosion control in potable water systems and other shipboard once-through water systems. Dosage varies between 4 – 8 mg/Ltr for ordinary water treatment. For drinking water, dosage should always be kept at or below 9 mg/Ltr (9 g/ton).The powder product should not be dosed directly into the water system. A water solution should be made prior to dosing.

Dosing method

Potable Water Stabilizer should be dosed to a suitable point in the system. If the expansion tank is used, adequate circulation must be assured.

Dosage and control

Make a 5% solution in fresh water by adding the powder slowly to the water while stirring. The solution should preferably ne portioned to maintain desired dosage, either by means of a simple bypass feeder, or with Rxsol Dosage System for Water Treatment. The product can be injected into the discharge line of the fresh water generator or directly into the fresh water pumps' suction manifold. If a high percentage of shore water is used the solution must be "slug" dosed into the tanks prior to taking water. Inject a 5% solution at a rate of 0.12 liters per m3 of water to obtain a 6 mg/Ltr concentration.

Features

Prevents «Red Water» in potable water systems. Provides scale and corrosion control in hot water heaters, coolers and water tanks. Controls corrosion in pipelines and other equipment handling softened or evaporated water. Effective at temperatures up to 60°C (140°F). Increases system life and reduces maintenance costs. Approved by Norwegian National Institute of Public Health as an additive to drinking water. Approved by NSF according to Standard 60. No restrictions on use of the treated water as feed water to boilers or engine cooling systems.

Order no:	Packing
Rxsol-70-7009	20 Ltr.
	25 Ltr.

Fuel Conditioner/Stabilizer

Product Description

Fuelcare is a pre-combustion conditioning treatment for residual fuel oils.

Product Properties

Fuelcare prevents and disperses sludge, stops stratification of fuel in tanks, breaks water-in-oil emulsions and gives a better separation of water and sediments from oil. It provides a more homogeneous fuel for combustion. Vessels bunker lines remain cleaner and filter blockages are reduced or prevented. Centrifugal water and contaminant separation is made more efficient and all system components stay cleaner. Down-time of separators, boilers, engines, etc is reduced due to more effective fuel handling. The treated oil has improved combustion quality because slow burning fuel components are kept in a finely dispersed state. An effective corrosion inhibitor coats all fuel system components with a water repellent film. This ensures that the fuel system is protected.

Directions for Use and Dose Rates

Ideally, Fuelcare should be dosed directly into the bunker tank prior to bunkering. However, it can be introduced to the settling tank or during transfer from storage. Dosage rates are best determined from the results of fuel analysis, i.e. sediment content or compatibility test which is easily performed on board using the Compatibility Test Kit.

Product Properties:-

APPEARANCE:	Pale yellow liquid
DENSITY in g/cm3 at 15°C:	0.9
FLASH POINT (PMCC) °C:	Above 61
COMPATIBILITY:	
Metal:	No known effect
Rubber:	May swell
Synthetic rubber:	May swell

Features, Benefits and Applications

- Disperses and prevents sludge formation, keeping fuel systems cleaner
- Stabilises fuel blends, reducing compatibility problems.
- Fuel acids are neutralised. Fuel system components
- have longer working life, less down-time
- Demulsifies water from fuel and improves centrifugal Separation
- Reduces corrosion in tanks and fuel lines
- Prevents filter blockage and improves injector spray Pattern
- Limits sludge and tank bottom deposits, maintains a cleaner fuel system
- Can be used as a cleaner for pre-heaters, burner tips, fuel filters, etc.

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-70-7002 **20 Ltr.**

25 Ltr.

DUAL PURPOSE PLUS (RXSOL-70-7002)

Product Description:-Dual Purpose Plus is a concentrated combustion improver for heavy fuel oils. It also has fuel conditioning properties.

Produces Properties:-The catalysts in Dual Purpose Plus react with heavy fuel particles during combustion. The fuel ignition temperature is reduced, resulting in increased combustion efficiency with less carbon left to form smoke and soot. Engine and exhaust system are kept cleaner with longer service life and less maintenance .Anti-polymerization agents inhibit sludge formation, while dispersants stabilize the fuel. This results in a cleaner fuel system and better fuel flow, giving improved fuel atomization and greater combustion efficiency. Sulphuric acid corrosion caused by condensing exhaust gases may be seen in any of the cooler parts of the boiler or engine system. Typical problem areas are cylinder liners (clover-leaf corrosion), valve stems and funnel uptakes. Dual Purpose Plus catalytically inhibits the formation of acid gases. This reduces the amount of acid present, thereby reducing acid corrosion.

Directions for Use and Dose Rates:-Dual Purpose Plus is completely oil-soluble and should be added via a metering pump into the suction side of the booster pump. Alternatively, it can be added into the settling tank. If so, the dose rate should be increased by 10%. As a general guide, the average dosage should be 1:4000. Alterations can then be made according to operating experience and results obtained. Where fuel analysis for Micro Carbon Residue, (MCR) is available, dose according to the table below:

MCR%	10	12	14	16	18
DOSE RATE	1:4000	1:3000	1:2500	1:2000	1:1000

Product Properties:-

Appearance	**Dark brown liquid**
Density	In g/cm3 at 15°C: 0.9
Flash Point	(PMCC)°C: Above 61
Capability	
Metal	No known effect
Rubber	May swell
Synthetic	Rubber May swell
Packaging	25/210 Ltr
Features	Benefits and Applications

Features, Benefits and Applications:-

- Improves combustion.
- Reduces carbon/ash deposits.
- Limits soot formation and smoke emissions.
- Overall improvement in fuel combustion and economy.
- Minimizes cold-end corrosion of exhaust trucking, uptakes, cylinder liners, valve stems, etc

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-16-1026 **25 Ltr.**

- Rapidly breaks water-in-oil emulsions
- Improves separator efficiency
- Prevents sludge formation in tanks and lines

Water-in-Fuel Emulsion Breaker

Product Description

Gamabreak rapidly breaks water-in-oil emulsions in all grades of fuel. It assists water removal in the settling tank and fuel centrifuges.

Product Properties

Gamabreak breaks water-in-oil emulsions by lowering the surface tension between the two phases. It is insoluble in water and remains effective even after the water has been removed. Powerful dispersants combat existing sludge formations while homogenizing the fuel to prevent new sludge from being formed. Centrifugal separation of catalyst fines is improved, reducing abrasion damage. The homogenizing action of Gamabreak keeps heavy fuel particles in suspension, therefore fuel filters block less frequently, tanks and lines remain cleaner, and in general, fuel systems maintenance is minimized. Consequently, a greater proportion of supplied fuel is available for combustion.

Direction for Use and Dose Rates

Dose into the bunker tank prior to, or during bunkering. Allow the product to mix well with the fuel. If fuel analysis is available, the dosage should be based on the water content, as per the following table.

Product Properties:-

APPEARANCE:	**Yellow liquid**
DENSITY in g/cm3 at 15°C:	0.9
FLASH POINT (PMCC) °C:	Above 61
COMPATIBILITY:	
Metal:	No known effect
Rubber:	May swell
Synthetic rubber:	May swell

Features, Benefits and Applications:-

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-70-7004 **25 Ltr.**

Product Description

Dieselite is a multi-functional fuel treatment containing combustion catalysts and ash modifiers. It is intended for use in diesel engines and boilers burning residual fuels.

Product Properties

Carbon residue formation during combustion is inhibited by catalysts that lower the ignition temperature of heavy asphaltenic particles. The combustion time is consequently increased, leading to a reduction of tar deposits and carbonaceous fire scale. Ash modifiers combine with fuel combustion ash to raise the sinter and melting points of the ash above the engine or boiler normal operating temperatures. High temperature corrosion is minimized, reducing maintenance and extending service life. The majority of ash formed is ejected with the exhaust gases in a fine, solid state, and any ash remaining in the exhaust system is easily removed by light brushing. The conversion of fuel sulphur to potentially corrosive sulphur trioxide gas is also inhibited. Sulphur trioxide reacts with condensed steam in the exhaust trucking, funnel uptakes and other cooler zones to form sulphuric acid. Dieselite is a wide spectrum additive intended for continuous use.

Directions for Use and Dose Rates

For best results, Dieselite should be dosed automatically using a metering pump to dose into the fuel feed line as near to the injector or burner pump as possible. Where Micro Carbon Residue (MCR) or vanadium/sodium analysis is available, use the following table:

Product Properties:-

APPEARANCE:	**Dark brown liquid**
DENSITY in g/cm3 at 15°C:	0.9
FLASH POINT (PMCC) °C:	Above 61
COMPATIBILITY:	
Metal:	No known effect
Rubber:	May swell
Synthetic rubber:	May swell

Features, Benefits and Applications

- Reduces smoke, soot and carbon deposits
- Raises the melting point of sodium vanadium fuel ash
- to reduce high temperature corrosion and ash deposits
- Cold-end corrosion reduced by inhibiting acid flue gas
- Extends service life of engine components

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-70-7011 **25 Kgs.**

Product Description

Soot Remover is a dry powder compound formulated for safe removal of soot and deposits from boilers and diesel engine exhaust systems.

Product Properties

If deposits are allowed to form on heat exchangers, the loss of efficiency can be directly related to extra fuel consumption. A 1 mm deposit is Approximately equivalent to a 10% efficiency loss, a 3 mm deposit can reduce efficiency by up to 50%. The normal ignition temperature of soot is around 600°C. This means that it is burned only in the hottest parts of the boiler or diesel exhaust systems. Due to the catalytic action of Soot Remover, the ignition temperature of the soot/deposit is reduced to less than 280°C. The carbon deposits are thus ignited, leaving an easily removed ash. The use of Soot Remover not only provides greater fuel efficiency, but also prevents acid formation in areas where severe corrosion could result in expensive damage, i.e. heat exchangers, super heaters, economizers, exhaust paths/stacks.

Directions for Use and Dose Rates

Soot Remover should be introduced to the boiler through a suitable port, preferably with a blower, ensuring that the powder is spread through the flame path towards the back of the combustion chamber. For Diesel engines, inject Soot Remover directly into the exhaust system upstream of the area to be treated.

Product Properties:-

APPEARANCE:	**Blue green powder**
DENSITY in g/cm3 at 15°C:	1.2-1.4
FLASH POINT (PMCC) °C:	**Not applicable**
COMPATIBILITY:	
Metal:	**If moist, may attack mild steel, iron and aluminum**
Rubber:	**Rubber: No known effect**

Features, Benefits and Applications:-

- Reduces soot and slag deposits
- Reduces cold-end corrosion
- Improves heat transfer
- Increases boiler efficiency
- Assists soot blowing

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-70-7011	25 Ltr.

Product Description

Soot Remover Liquid is formulated for effective prevention of soot and fire scale deposits from boilers and diesel engine exhaust systems.

Product Properties

If fire scale is allowed to form on heat exchangers, the loss of efficiency can be directly related to extra fuel consumption. A 1 mm deposit is approximately equivalent to a 10% efficiency loss, a 3 mm deposit can reduce efficiency by up to 50%. The normal ignition temperature of soot is around 600°C. This means that it is burned only in the hottest parts of the boiler or diesel exhaust systems. Due to the catalytic action of Soot Remover Liquid, the ignition temperature of the soot/fire scale is reduced to less than 250°C. The carbon deposits are thus ignited, leaving an easily removable ash. The use of Soot Remover Liquid not only provides greater fuel efficiency, but also prevents acid formation in areas where severe corrosion could result in expensive damage, i.e. heat exchangers, super heaters, economizers, exhaust paths/stacks.

Directions of Use and Dosage Rates

Soot Remover Liquid should be introduced to the boiler through a suitable port, preferably with an injector, ensuring that the liquid is spread through the flame path toward the back of the combustion chamber. For Diesel engines, inject Soot Remover Liquid directly into the exhaust system upstream of the area to be treated. Soot Remover Liquid should be injected with the following dosing equipment:

Boiler

Steam Raised tons/hour	Fuel use tons/day	Dose Rate kg/day
3	5.5	0.90
6	11	1.50
9	16	2.40
12	21	3.0
15	27	3.60

Diesel Engines

Fuel Consumption tons/day	Dose Rate kg/day
10	1.3
20	2.6
30	3.0

Product Properties

APPEARANCE:	**Clear blue liquid**
pH:	3
Solubility in water:	100 %
DENSITY, g/cm3 at 15°C:	1.12
FLASH POINT (PMCC) °C:	Not applicable

Features, Benefits and Applications

- For the prevention of soot and firescale deposits in
- diesel engine and boiler exhaust systems
- For reduction of cold-end corrosion where surface
- temperatures are lower than the dew point of the exhaust gases
- Reduce soot and slag deposit
- Reduces cold-end corrosion
- Improves heat transfer
- Increases boiler efficiency
- Aids soot blowing

****Read the Material Safety Data Sheet before using this product****

Order no: **Packing**

Rxsol-70-7006 **20 Ltr.**

25 Ltr.

Product Description:-

Rxsol Valvecare is specifically intended for treatment and reduction of corrosive deposits formed on exhaust valve seats and turbocharger components. Rxsol Valvecare physically modifies fuel ash, raising the sinter and melting points of the ash above the normal engine operating temperatures. Modified ash particles are solid, small and non-adhesive and are ejected with the exhaust gas stream. Valve seating's remain intact as ash deposits on valve seats are reduced. Guttering is minimized and valve cone and seat lives are extended, allowing for greater time between overhauls. Turbocharger and exhaust system fouling is controlled as the ash particles in the gas stream are less adhesive. Exhaust systems remain cleaner and any ash that is formed is friable and easily removed by conventional methods such as brushing. Another advantage found with Rxsol Valvecare is acid reduction. Vanadium in the fuel has a catalytic action, increasing the conversion from sulphur dioxide to sulphur trioxide during combustion. The sulphur trioxide then reacts with steam in the exhaust system, increasing the dew point to form sulphuric acid. Rxsol Valvecare keeps the complex vanadium and sodium ash compounds in a solid, non-molten state, inhibiting fused salt corrosion.

Directions for Use and Dose Rates:-

- Rxsol Valvecare should be dosed either directly into the service
- tank or by automatic metering into the suction side of the
- booster pumps. Typical dose rates vary between 1:1000
- and 1:5000 depending on the nature and severity of the
- problem. Use the table below for optimum dosage.

Product Properties:-

APPEARANCE:	**Pale colored liquid**
DENSITY in g/cm3 at 15°C:	**0.9**
FLASH POINT (PMCC) °C:	**Above 61**
COMPATIBILITY:	
Metal:	**No known effect**
Rubber:	**May swell**
Synthetic rubber:	May swell

Features, Benefits and Applications:-

- Raises the melting point of sodium vanadium ash and reduces high temperature corrosion and guttering
- Keeps exhaust valves and turbochargers cleaner
- Reduces the amount of ash deposits throughout the exhaust system
- Extends service life of exhaust valves and extends the service interval for water or granulate washing of turbocharger blades
- Valvecare has been specially formulated to combat exhaust valve burning and erosion problems associated with sodium and vanadium contamination of poor quality heavy residual fuels

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-70-7006	25 Ltr.
	210 Ltr.

Product Description

Burnaid is a concentrated organic combustion improver. It contains no metals and can be used in diesel engines and boilers.

Product Properties

The organic compounds in Burnaid promote improved combustion by reacting with fuel particles, thus lowering ignition temperatures. The result is less carbon deposits, soot and smoke. Engine and boiler combustion surfaces are kept cleaner. Sludge formation is inhibited through the action of anti-polymerization agents. Fuel stability is improved through the action of solvents and dispersants. The results are improved combustion efficiency and fuel atomization.

Directions for Use and Dose Rates

Burnaid is completely oil soluble. The initial dosage rate is one liter to five tons of fuel. Actual dosage rates will be dependent on fuel quality and operating experience. Burnaid should be added via a metering pump. If no metering pump is available, use the suction manometer on the transfer pump as the dosage point. For diesel engines and boilers, Burnaid should be dosed during transfer from storage to the settling tank. Where fuel analysis for Micro Carbon Residue (MCR) is available, or where CCAI values are known, dose according to the following table:

MCR%	8	9	10	12
Dose Rate	1:7981	1:6985	1:5992	1:4990
CCAI	835	840	845	850
Dose Rate	1:8000	1:7000	1:6000	1:5000

Burnaid can be dosed using Fuel Oil Treatment Dosing Unit,

Product properties:-

APPEARANCE:	**Clear, pale yellow liquid**
DENSITY in g/cm3 at 15°C:	0.9
FLASH POINT (PMCC) °C:	Above 61
COMPATIBILITY:	
Metal:	No known effect
Rubber:	May swell
Synthetic rubber:	May swell

Features, Benefits and Applications

- Improves combustion
- Reduces carbon deposits
- Limits soot formation
- Limits smoke emissions
- Reduces corrosion in tanks and fuel lines
- Conditions sludge in fuel
- Improves fuel stability
- Contains no metals
- Reduces the demand for excess air in boilers
- Improves boiler efficiency

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-15-3007	500 ml
	5 Ltr.
	10 Ltr.
	25 Ltr.

1 box=28 (500 ml dish wash)

Dish Wash (RXSOL-15-3007)

Product Description:-Rxsol DISH WASH LIQUID is a highly concentrated, neutral liquid detergent, golden yellow in color, with a floral fragrance. It is very active and when diluted as recommended, is suitable for all manual cleaning and dishwashing, in household and institutional applications. Rxsol DISH WASH LIQUID is a blend of special detergents for tough action against grease, fats, and other deposits. The coupling solvents incorporated in it helps it go into solution instantly, penetrate contamination and rapidly emulsify and disperse any residues. It is effective in soft and hard water, hot or cold. Rxsol DISH WASH LIQUID is specially formulated for efficient cleaning, with quick and spot-free rinsing.

Features:-

Highly concentrated	**Economical**
Contains special detergents & coupling solvents	Cleans efficiently and almost instantly
Contains perfume	Leaves a lingering fresh fragrance

Direction for Use:-

Rxsol DISH WASH LIQUID can be used for conventional dishwashing applications. Dilute solution can be applied to the surface and rub with a sponge and then rinse with clean water. For general cleaning, optimum dilutions of 1:30 will be ideal. For oily and dusty surfaces, 1:10 dilution ration, together with efficient scrubbing and warm water will be adequate.

Characteristics:-

Appearance	**Orange, moderately viscous liquid**
Odor	Lemon
Specific Gravity	1.01 - 1.02
Solubility	Water soluble in all proportions
Flammability	Non-flammable
pH of Concentrate	Typically 7
pH of Solution	Typically 7
Use Concentration	Neat/diluted as above
Use Temperature	Diluted with either warm or cold water
Corrosive Action	Non-corrosive
Packaging	Cartons of 12 x 1 liter and 24 x 500 ml plastic containers
Storage Condition	Store in closed

Health And Safety Information:-

Safety Advice:-Rxsol DISH WASHING LIQUID is not considered harmful to the skin, however, for use over an extended period, gloves should be worn. The product is safe on naked hands, unless the user's skin is sensitive.

First Aid:-Wash splashes from skin with soap and water. For splashes to eyes, flush thoroughly with water. If swallowed, DO NOT INDUCEVOMITING, give water or milk to drink. Medical attention should be obtained following splashes to eyes or if swallowed.

Spillage:-Mop-up spillage or absorb with a mineral absorbent.

Order no:	Packing
Rxsol-14-1034	1400 ml
	5 Ltr.

Soft Hand Shampoo-RXSOL-14-1034

Disinfectant Cleanser

Hygiene and hand washing

It is scarcely necessary to extol the virtues of good hygiene. There are many bacteria that may be found on the skin of a particularly healthy person. These are spread either through direct contact or via equipment and surfaces. Disinfecting

the hands is a requirement within many professions - health care and the catering trade are prime examples.

SOFTCARE PLUS is an antimicrobial skin cleanser which contains :

2,4,4, Trichloro-2-hydroxy diphenylether - 0.5% (w/w). This compound is skin substantive hence it gives residual sanitatisation for longer period. This helps reduce the risk of food contamination or cross-infection at your establishment.

Usage
SOFTCARE PLUS gentle hand cleanser is ready-to-use. It can be easily dispensed through any refill / top-fill dispensers. SOFTCARE PLUS disinfectant cleanser is so formulated that, about 3 - 5 ml. is sufficient for a good hand wash. This makes it extremely cost-effective.

Product Data

Appearance : Green liquid

pH as such : 5 – 7

Viscosity (Spindle 2; 30rpm) : 150 cps min.

Bactericidal agent : Irgasan DP 300 - 0.3% (w/w)

(2,4,4, Tricolor - 2 – hydroxyl diphenylether)

Specific gravity @ 25OC : 0.94 - 1.07

Packaging
1400 ml , 5 Ltr.

Order no:	Packing
Rxsol-14-1034	500 ml
	5 Ltr.

Highly conc. tuff Cleaner (Toilet Cleaner)(RXSOL-15-1019)

Product Description:

RXSOL-15-1019 is a highly concentrate water-based cleaner for use as a Biological Toilet Cleaner or general degreasing. It contains wetting a unique biologically active liquid formulation containing specialized bacterial strains, biodegradable low foaming chemical cleaners and anti foam agents.

Procedure of Use:

General Cleaning

RXSOL-15-1019 effectively cleans the toilets and doses millions of selected, safe bacteria into the sanitary system. These powerful specialized bacteria colonies the organic waste lining the pipe system and literally eat them clean. On draining to the sewage treatment plant, the bacteria will greatly enhance the biological activity, reducing solids and odors. Grease, fats, sewage, starch and other organic compounds are digested by RXSOL-15-1019 . The degradation of paper, protein, waste product residuals and other odorous materials is also enhanced.

Method of Application and Dose Rates:-

Use daily as a normal toilet cleaner. Leave cleaner in the bowl. Scrub vigorously with toilet brush. Best substitute of toxic cleaners such as acids, disinfectants, bleaches etc., will have a detrimental effect on the biological activity and should not be used with RXSOL-15-1019

Product Properties:-

Appearance	**Green liquid**	
pH	8 .0 - 9.0	
Density	In g/cm^3 at 15°C: 1.02	
Flash Point	(PMCC)°C:: None	
Compatibility		
Metal	No known effect	
Rubber	No known effect	
PACKAGING	Order No.:	Size
	RXSOL-15-1019	Non-returnable boxes of
		25 liter plastic jar.

Characteristics:-

- Water-based cleaner.
- Biodegradable.
- Non-flammable.
- Free from hydrocarbon solvents.
- Effective & economical in use.
- Rxsol RT 2002 A has numerous cleaning applications including removal of Greases, Waxes, Oil, Sludge, Soot, Carbon deposits & General dirt and Grime.
- Cleans toilets, sinks, shower etc. Product is safe and has no special handling or application requirements.

****Read the Material Safety Data Sheet before using this products****

Order no: **Packing**

Rxsol-16-1019-Bio **5Ltr.**

25 Ltr.

Biological Toilet Cleaner (RXSOL-16-1019-BIO)

Product Description:-RXSOL-16-1019-BIO

Is a highly concentrate water-based cleaner for use as a Biological Toilet Cleaner or general degreasing. It contains wetting a unique biologically active liquid formulation containing specialized bacterial strains, biodegradable low foaming chemical cleaners and anti foam agents.

Procedure of Use:

General Cleaning:-RXSOL-16-1019-BIO effectively cleans the toilets and doses millions of selected, safe bacteria into the sanitary system. These powerful specialized bacteria colonies the organic waste lining the pipe system and literally eat them clean. On draining to the sewage treatment plant, the bacteria will greatly enhance the biological activity, reducing solids and odors. Grease, fats, sewage, starch and other organic compounds are digested by RXSOL-16-1019-BIO .The degradation of paper, protein, waste product residuals and other odorous materials is also enhanced.

Method of Application and Dose Rates:-Use daily as a normal toilet cleaner. Leave cleaner in the bowl. Scrub vigorously with toilet brush. Best substitute of toxic cleaners such as acids, disinfectants, bleaches etc., will have a detrimental effect on the biological activity and should not be used with RXSOL-16-1019-BIO

Product Properties:-

Appearance	***Green liquid***	
pH	*8 .0 - 9.0*	
Density	*In g/cm^3 at 15°C: 1.02*	
Flash Point	*(PMCC)°C:: None*	
Compatibility		
Metal	*No known effect*	
Rubber	*No known effect*	
PACKAGING	*Order No.:*	*Size*
	Rxsol RT 2002 A	*Non-returnable boxes of25 liter plastic jar.*

Characteristics:-

- Water-based cleaner.
- Biodegradable.
- Non-flammable.
- Free from hydrocarbon solvents.
- Effective & economical in use.
- Rxsol RT 2002 A has numerous cleaning applications including removal of Greases, Waxes, Oil, Sludge, Soot, Carbon deposits & General dirt and Grime.
- Cleans toilets, sinks, shower etc.
- Product is safe and has no special handling or application requirements.

****Read the Material Safety Data Sheet before using this produce****

Order no:	Packing
Rxsol-16-1019-Bio	10 Ltr.
	25 Ltr.

Product Description

Rxsol Zyme BTC is a unique biological active liquid formulation containing specialized bacterial strains, biodegradable low foaming chemical cleaners and anti foam agents.

How it works

Rxsol Zyme is specifically formulated to replace aggressive, toxic toilet cleaners that can disable the sewage treatment plant by killing the naturally occurring bacteria that are essential to its operation. Conventional toilet cleaners may also cause foaming in the vacuum inductor which destroys the vacuum in the sanitary flushing system. Rxsol Zyme BTC effectively cleans the toilets and doses millions of selected safe bacteria into the sanitary system. These powerful specialized bacteria colonies the organic waste lining the pipe system and remove the organic deposit. On draining to the sewage treatment plant, the bacteria will enhance the biological activity, reducing solids and odors. Grease, fats, starch and other organic compounds are digested by Rxsol Zyme BTC. The degradation of paper, protein, waste product residuals and other odorous materials is also enhanced. Rxsol Zyme BTC cleans more thoroughly and deeply compared to conventional cleaning products. The use of cleaning products containing hazardous chemicals such as acids, caustics, bleaches, disinfectants, etc., can be reduced.

Directions for Use and Dose Rates

Use Rxsol Zyme BTC daily as a normal toilet cleaner. Lift up seat, open the bottle and direct nozzle downwards. Squeeze and direct the jet to adequately cover the surface of the toilet bowl. After some minutes scrub vigorously with a toilet brush and flush with water. For removal of water scale, uric acid and rust stains, use Rxsol Zyme Toilet Descaler. See product data sheet. For heavy soil pipes dose Rxsol Zyme DPC to initiate the cleaning process and continue with Rxsol Zyme BTC. See also product data sheet for Rxsol Zyme DPC. The use of toilet cleaners containing toxic ingredients as acids, disinfectants, bleaches, etc., will have a detrimental effect on the biological activity and should not be used with Rxsol Zyme BTC.

Product Properties

APPEARANCE	Green liquid
pH, in conc.	9
DENSITY, in g/cm3 at 15°C	1.0
COMPATIBILITY	
Metal	No known effect
Rubber	No known effect
Synthetic rubber	No known effect

Features, Benefits and Applications

- Easy to use
- Biodegradable
- Suitable for use in all marine sanitary and sewage treatment systems
- Cleans toilets, sinks, showers, etc.
- Digests faces, grease, fat, starch and other solid waste materials
- Removes obnoxious odors from the sanitary system
- It is safe and has no special handling requirements
- Replaces conventional cleaners potentially harmful to the biological sewage system

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-15-1497	5 Kgs.
	10 Kgs.

Biological Drain and Pipe Cleaner

Product Description

Rxsol Zyme DPC is a concentrated biologically active powder formulation containing a blend of patented bacterial strains, specifically developed to deal with sewage wastes. It is packed as water soluble sachets (Solupac).

How it Works

Rxsol Zyme DPC is formulated to degrade excess residual organic waste products causing blockage, or slow draining in sinks, showers, scuppers, drains, etc. The specialized bacterial strains and enzymes in Rxsol Zyme DPC will digest grease, fats, starch and other organic compounds. The bacteria in Rxsol Zyme DPC will colonies the waste soil, which lines the pipe work system, and degrade the waste all the way down to carbon dioxide and water, until the system is clean. On draining to the holding tank or sewage treatment plant, Rxsol Zyme DPC will greatly enhance the biological activity breaking down solids and removing obnoxious odors which can vent back through the systems.

Directions of Use and Dosage Rates

Pipe Cleaning

Maintenance dosing will keep sinks, scuppers and waste food disposal units clean, clear and odor free. A liquid solution should be prepared by adding one solupac to 10 liters of hand hot (35°C) fresh water and left for 15 minutes (stirring periodically) for the bacteria to activate. Initial doses of 0.5 liters of this solution should be applied into sinks, scuppers, drains, waste food disposal units, etc. A maintenance dose once or twice a week can then be applied to keep the pipes in clean condition. Harsh toxic cleaners (acids, caustics, disinfectants) should not be used as these will kill off the bacterial action in the pipes. Before plumbing work for pipe modification or retrofits, pipes can be cleaned by isolating the system and filling pipes with the solution for up to 48 hours before draining. If necessary, further applications should be made until drains run clean.

Holding Tanks

Organic wastes can be kept liquid and pump able. Tanks can be cleaned without manual entry and without the use of harsh toxic cleaning chemicals. Prepare a solution of one solupac to ten liters of hand hot (35°C) fresh water and left for 15 minutes (stirring periodically) before dosing into the holding tank once or twice a week. The dose rates should be approximately one solupac per 1000 liter waste in the tank. Tank cleaning should be carried out using Rxsol Zyme 700FN.

Product Properties

APPEARANCE	Tan, saw dust like powder in sealed solupacs
pH, in conc	N/A
COMPATIBILITY	
Metal	No known effect
Rubber	No known effect
Synthetic rubber	No known effect

Features, Benefits and Applications

- Powder biological formulation for easy use
- Biodegradable
- Clears pipes and systems blocked by organic waste residuals
- Eliminates obnoxious odours from soiled pipe lines
- Cleans fouled pipes and systems, particularly long horizontal runs
- Keeps holding tank organic waste liquid pump able and odor free
- Cost effective, saves the time, money and manpower of plumbing operations to clear blocked pipe work
- Overcomes potential safety problems

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-15-1539	5 Ltr.
	10 Ltr.

Biological Drain and Pipe Cleaner

Product Description:-Rxsol Zyme DPC is a concentrated biologically active powder formulation containing a blend of patented bacterial strains, specifically developed to deal with sewage wastes. It is packed as water soluble sachets (Solupac).

How it Works

Rxsol Zyme DPC is formulated to degrade excess residual organic waste products causing blockage, or slow draining in sinks, showers, scuppers, drains, etc. The specialized bacterial strains and enzymes in Rxsol Zyme DPC will digest grease, fats, starch and other organic compounds. The bacteria in Rxsol Zyme DPC will colonise the waste soil, which lines the pipe work system, and degrade the waste all the way down to carbon dioxide and water, until the system is clean. On draining to the holding tank or sewage treatment plant, Rxsol Zyme DPC will greatly enhance the biological activity breaking down solids and removing obnoxious odors which can vent back through the systems.

Directions of Use and Dosage Rates

Pipe Cleaning

Maintenance dosing will keep sinks, scuppers and waste food disposal units clean, clear and odor free. A liquid solution should be prepared by adding one solupac to 10 liters of hand hot (35°C) fresh water and left for 15 minutes (stirring periodically) for the bacteria to activate. Initial doses of 0.5 liters of this solution should be applied into sinks, scuppers, drains, waste food disposal units, etc. A maintenance dose once or twice a week can then be applied to keep the pipes in clean condition. Harsh toxic cleaners (acids, caustics, disinfectants) should not be used as these will kill off the bacterial action in the pipes. Before plumbing work for pipe modification or retrofits, pipes can be cleaned by isolating the system and filling pipes with the solution for up to 48 hours before draining. If necessary, further applications should be made until drains run clean.

Holding Tanks

Organic wastes can be kept liquid and pump able. Tanks can be cleaned without manual entry and without the use of harsh toxic cleaning chemicals. Prepare a solution of one solupac to ten liters of hand hot (35°C) fresh water and left for 15 minutes (stirring periodically) before dosing into the holding tank once or twice a week. The dose rates should be approximately one solupac per 1000 liter waste in the tank. Tank cleaning should be carried out using Rxsol Zyme 700FN

Product Properties

APPEARANCE	Tan, saw dust like powder in sealed solupacs
pH, in conc.	N/A
COMPATIBILITY	
Metal	No known effect
Rubber	No known effect
Synthetic rubber	No known effect

Features, Benefits and Applications

- Powder biological formulation for easy use
- Biodegradable
- Clears pipes and systems blocked by organic waste residuals
- Eliminates obnoxious odors from soiled pipe lines
- Cleans fouled pipes and systems, particularly long horizontal runs
- Keeps holding tank organic waste liquid pump able and odor free
- Cost effective, saves the time, money and manpower of plumbing operations to clear blocked pipe work
- Overcomes potential safety problems associated with the use of toxic cleaning chemicals

****Read the Material Safety Data Sheet before using this product****

Order no:	Packing
Rxsol-14-1034	1 Ltr.
	5 Ltr.
	10 Ltr.
	20 Ltr.
	25 Ltr.

Bleaching Liquid (RXSOL-15-1500)

Description :

Bleach, which is also referred to as Clorox or Dixichlor, is the trade name for Sodium Hypochlorite solution (11-13%) and is a strong oxidizer. Bleach substitute is also an oxidizer.

*These products become more aggressive with temperature increase, and should not be allowed to dry on tank walls or stored in cargo tanks as cleaning solution or slops.

Bleach will
Remove odors.
Remove color.
Improve permanganate time.

Spraying:

Following rough washing to a good Water White or better, apply dilute Bleach to 1 – 3% strength. First wet the tank surface (spray with DI water), then spray all over with Bleach, wait 30 minute (but do not allow to dry) and then rinse very well with DI water, including the tank top towards the sump. To ensure that you have covered all areas properly, this process should be carried out at least twice with good DI water.

Injection : no.

Re-circulation :

Following rough washing to a good Water White standard or better, apply dilute Bleach to 1-3% strength. Mix sufficient Bleach with fresh water in the tank and heat this mixture to 40 – 50 0 C, circulate through the drop line if fitted and then circulate through Butterworth machine for 3 hours. After re-circulation immediately warm Butterworth to (500 C) the tank for 3 hours at maximum pressure, increase the water temperature to 80-85 o C after 45 minutes. Check (by smell) that there is no Bleach remaining, then fresh water rinse and dry.

* When there are a number of tanks requiring re-circulation, it may be significantly more efficient to make up a large batch or number of batches that can be transferred on between tanks as required.

* Use a strainer at the pump stack when circulating any solution. Tank Lining – Stainless / Zinc / Epoxy / Phenolic (Extreme care must be taken if product other than bleach. Substitute is to be used in any coated space).

****Read the Material Safety Data Sheet before using this produce****

Order no:	Packing
Rxsol-14-1034	5 Ltr.
	20 Ltr.
	25 Ltr.

CARPET SHAMPOO (RXSOL-15-0521)

(BIODEGRADABLE)

Introduction :-

RXSOL-15-0521 is almost neutral shampoo suitable cleaning all types, (Specially woolen mix) carpet. It effectively removes dirt (grease) layer by emulsification with water molecule.

Composition:-

A balance formulation of non ionic detergent, thickening agents and wetting agent.

Mechanism :-

As RXSOL-15-0521 contains water poured over the dirt garments, It's molecule peg into it and emulsifying the dirt (oil- contains) by that's way easily dislodged from garment by tumbling and stirring with water.

Characteristics:-

NEUTRAL. Non ionic Very gentle on hands. Highly concentrate

Application:-

An extremely high solids carpet shampoo concentrate with exceptionally low, per gallon end costs. Can be diluted the 1 part concentrate to 1 part water or 1part concentrate to 2 parts water to yield a very effective end product. This is turn, may be diluted at 1 part shampoo to 16-parts water to make in rotary wet foam, automatic and semi - automatic dry foam machines.

Caution:-

Although RXSOL-15-0521 is non toxic and non irritant avoid eye contact If contact occurs wash with Ample quantity of water.

Instructions for use:-

Preparation:-

Preclean heavy traffic areas with a carpet pile brush and then vacuum the entire carpet. Or brush vacuum the entire carpet. Remove spots / stains.

Dilution:

Light soiling : 300 ml RXSOL-15-0521 1 in 10 liters of water (3% solution)Heavy soiling : 1000 ml RXSOL-15-0521 in 10 liters of water (10% solution)

Nitrite Test Kit Complete Set:-

(Reagent TK5, Reagent TK6, Test Tube, Titrator)

PROCEDURE for Test

STEP WISE:-

Measure 1 ml of SAMPLE WATER in graduated TEST TUBE / CYLINDER, with the help of syringe / puppet and diluted with Distilled Water up to 10 ml.

Add 1-2 drops of RXSOL TK5 and mix with the stirring rod, to obtain ORANGE / light reddish color.

Add RXSOL TK6 drop by drop , mixing with the stirring rod until For endpoint ORANGE to BLUE / GREENISH color just appears / develop.

Each DROPS is equivalent to 50 PPM of NO2

CALCULATION: 50 X Number of DROPS of TK6

Storage Requirements: Kits should be stored in the dark and at room temperature.

Shelf Life: The nitrite Titrets kits have 2-year shelf lives. Accuracy: Due to the non-linear nature of the test scale, the accuracy of this test varies with the location of the test result on the scale. At twice the minimum concentration for a particular

NITRITE IMPORTANCE:

Nitrite, an intermediate in the nitrogen cycle, is formed during the decomposition of organic matter but readily oxidizes to form nitrate. These processes occur in

Wastewater treatment plants, water distribution systems, and natural waters. Nitrites are useful as corrosion inhibitors, preservatives, pigments, and in manufacturing many organic preservative chemicals. A Maximum Contaminant Level of 1 mg/L has been established by the USEPA for nitrite-nitrogen in drinking water.

Chloride Test Kit(REAGENT & APPARATUS):

Reagent: RXSOL TK 1 , TK 2 , TK 3 , TK4 .

Apparatus : TEST TUBE , Titrator or DROPPER.

PROCEDURE for test (STEP WISE):-

1) Measure 15 ml of SAMPLE WATER in graduated TEST TUBE / CYLINDER

2) Add 1-2 drops of RXSOL **TK1** and mix with the stirring rod, If sample turns red / PINK then follows 3rd step otherwise if sample remains colorless proceed to step 4.

3) Add **RXSOL TK2 drop** by drop, mixing with the stirring rod until color just disappears.

4) Add 3 drops of **RXSOL TK3** and mix with stirring rod , the sample will turn YELLOW.

5) Add **RXSOL TK4** carefully by counting drop by drop and mixing thoroughly until a light reddish / pink / brown color develop

TK4 Drops	Chloride value in	PPM
1	>>>>>>>>>>>>>	8
2	>>>>>>>>>>>>>	16
3	>>>>>>>>>>>>>	24
4	>>>>>>>>>>>>>	32
5	>>>>>>>>>>>>>	40
6	>>>>>>>>>>>>>	48
7	>>>>>>>>>>>>>	56
8	>>>>>>>>>>>>>	64
9	>>>>>>>>>>>>>	72
10	>>>>>>>>>>>>>	80
11	>>>>>>>>>>>>>	88
12	>>>>>>>>>>>>>	96
13	>>>>>>>>>>>>>	104
14	>>>>>>>>>>>>>	112
15	>>>>>>>>>>>>>	120
16	>>>>>>>>>>>>>	128
20	>>>>>>>>>>>>>	160
26	>>>>>>>>>>>>>	192
28	>>>>>>>>>>>>>	208
30	>>>>>>>>>>>>>	224
32	>>>>>>>>>>>>>	240
34	>>>>>>>>>>>>>	256
36	>>>>>>>>>>>>>	272
38	>>>>>>>>>>>>>	288
40	>>>>>>>>>>>>>	304
42	>>>>>>>>>>>>>	320
44	>>>>>>>>>>>>>	336
46	>>>>>>>>>>>>>	352
48	>>>>>>>>>>>>>	368
50	>>>>>>>>>>>>>	384
55	>>>>>>>>>>>>>	400
60	>>>>>>>>>>>>>	440
70	>>>>>>>>>>>>>	480
80	>>>>>>>>>>>>>	560
90	>>>>>>>>>>>>>	720
100	>>>>>>>>>>>>>	800

CHLORIDES Content up to 100 PPM level s are acceptable , in low pressure boiler , while more then 300 PPM level should be reduced by increased blow down . Where as chlorides levels are very high the quality of the feed water should be checked in view to possible saline contamination.

Alkalinity TEST FOR BOILER & COOLING WATER

REAGENT & APPARATUS

Reagent: RXSOL TK 7 , TK 8 , TK 9 , . Apparatus: TEST TUBE , Titrator or DROPPER

PROCEDURE for p-ALKALINITY test (STEP WISE)

1) Measure 10 ml of SAMPLE WATER in graduated TEST TUBE / CYLINDER

2) Add 1-2 drops of RXSOL TK7 and mix with the stirring rod , If sample turns red / PINK (which indicates presence of p-Alkalinity) then follows 3rd step otherwise if sample remains colorless (Record p-Alkalinity = 0) .

3) Add **RXSOL TK9** drop by drop (by counting) , mixing with the stirring rod until color just disappears. Each drop is equivalent to 25 ppm of p-Alkalinity , expressed as $CaCO_3$

RESULT:- Each DROPS is equivalent to 25 PPM of p-Alkalinity.

NOTE:- p-Alkalinity VALUE = 25 X (Total Number of DROPS of TK9 , during 3rd step)

B.) PROCEDURE for m-ALKALINITY test (STEP WISE)

1) Measure 10 ml of SAMPLE WATER in graduated TEST TUBE / CYLINDER

2) Add 2-3 drops of **RXSOL TK8** and mix with stirring rod , the sample will turn to BLUISH-GREEN .

3) Add **RXSOL TK9** carefully by counting drop by drop and mixing thoroughly until a light reddish (salmon) pink color develop.

RESULT: Each DROPS is equivalent to 25 PPM of m-Alkalinity

M-Alkalinity VALUE = 25 X (Total Number of DROPS of TK9, during 1.3 step)

C.) PROCEDURE for TOTAL ALKALINITY (VALUE of A + VALUE of B)

2.1 Measure 10 ml of SAMPLE WATER in graduated TEST TUBE / CYLINDER

2.2 Add 1-2 drops of **RXSOL TK7** and mix with the stirring rod , If sample turns red / PINK (which indicates presence of p-Alkalinity) then follows 3rd step otherwise if sample remains colorless (Record p-Alkalinity = 0) then proceed to STEP- 4.

2.3 Add **RXSOL TK9** drop by drop (by counting) , mixing with the stirring rod until color just disappears. Each drop is equivalent to 15 ppm of p-Alkalinity , expressed as $CaCO_3$

2.4 Add 2-3 drops of **RXSOL TK8** and mix with stirring rod , the sample will turn to BLUISH-GREEN .

2.5 Add **RXSOL TK9** carefully by counting drop by drop and mixing thoroughly until a light reddish (salmon) pink color develops.

RESULT:- Each DROPS is equivalent to 25 PPM of Alkalinity

NOTE:- p-Alkalinity ppm $CaCO_3$VALUE = 25 X (Total Number of DROPS of TK9 , during 2.3 step) = **X** (Say) m-Alkalinity ppm $CaCO_3$VALUE = 25 X (Total Number of DROPS of TK9 , during 2.5 step) = **Y** (Say) **Total Alkalinity ppm $CaCO_3$VALUE** = X+Y

NUMBER OF DROPS OF TK9		p-Alkalinity as CaCO3
1	>>>>>>>>>>>>	25
2	>>>>>>>>>>>>	50
3	>>>>>>>>>>>>	75
4	>>>>>>>>>>>>	100
5	>>>>>>>>>>>>	125
10	>>>>>>>>>>>>	250
20	>>>>>>>>>>>>	500
30	>>>>>>>>>>>>	750
40	>>>>>>>>>>>>	1000

Optimum Result : p-Alkalinity level is between 100 to 150 PPM is suggested.

if p-Alkalinity level is more then 150 ppm then level should be reduced by increased BLOW DOWN process with immediate effect.

For Below 50 ppm , Dose ½ Ltr of RXSOL-50-5001-BWT for 1000 Ltr of BOILER WATER , to maintain p-Alkalinity level 100 ppm.

Refill pack : REPLACEMENTS

TK7 : ECONOMIC PACK (100 / 200 / 500 ml) available

TK8 : ECONOMIC PACK (100 / 200 / 500 ml) available

TK9 : ECONOMIC PACK (100 / 200 / 500 ml) available