

CLENER FOR AIR COOLERS AND TURBOCHARGERS Cleaner 620

Product Description

Cleaner 620 is a powerful solvent emulsion cleaner for cleaning of diesel engine air coolers ,scavenging air systems and turbochargers.

Directions use In Service cleaning

the general principle is to inject a solution of cleaner 620 into the air trunking upstream of the charge air cooler followed by a clean water rinse. for efficient cleaning of air coolers,it is necessary to use correctly installed dosing and injection equipment.To calculate the amount of solution required to clean an air cooler, calculate or find the cross-sectional area of the cooler and use 3 litres of cleaning solution per square metre or as table below.

Engine HP.	Solution mix . with 25% cleaner 620
6,000 to 12,000	3 litre mix
12,000 to 24,000	4.5 litre mix
24,000 or more	6 litre mix

For in-service cleaning of air cooler and air-side of turbochargers, a solution of 25% cleaner 620 in freshwater is recommended.

The appropriate dose of cleaner is then put in the dosing pot and injected upstream of the air cooler in 10 minutes After a further 10 minutes ,a similar quantity of fresh water is injected to rinse off the emulsified deposits.

Rate and frequency of application depends mainly on the condition of the air coolers. However , when starting with the use of Air cooler cleaner, we recommend injection every 24 hours. After initial cleaning period, the cleaning effect should last for 48 hours of operational time. Although frequency of cleaning may vary, the calculated cleaning dose should remain the same .This cleaning method is only recommended if approved by engine manufacturers.

Hand spray cleaning

in this situation the engine must be stopped. open an appropriate air trunking inspection cover.open air cooler drain valves.


Using a pressure hand spray, apply undiluted cleaner 620 all over the cooler coils. Allow the cleaner 620 to penetrate the deposits for a minimum of 1 hour, then use a high pressure lance or water jet to wash off the loosened deposits .After satisfactory cleaning, and flushing through with fresh water , close air cooler drains.

Soak Method

this method may be used for machine parts with stubborn carbon deposits.

put parts to be cleaned into a bath of undiluted cleaner 620 and allow deposits to be broken down and loosened before removal, then rinse.

Product properties

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Appearance:	brown - yellow
Density:	1 gr/cm ³ at 15C°
Flash point:	(PMCC)18°c : Above 67
Compatibility:	
Metal :	No known effect
Rubber:	May swell slightly
Synthetic rubber:	May swell

Dosing procedure

- 1) Check that all valves are closed A, B &C.
- 2) Thoroughly mix up a 25% solution of Air cooler cleaner and fresh water and pour this into the dosing pot through the filter funnel, closing filter valve after
- 3) Open valve A allowing compressed air to the injector nozzle.
- 4) Open valve B and C to balance trunking pressure in dosage vessel. Emulsion solution will now be drawn down into the injector and be atomised in the scavenge air trunking.it should take about 10 minutes to empty the dosage vessel.
- 5) Close all valves A,B&C.
- 6)After a residence time of 10 minutes, repeat sequence of operation above using one full dosing vessel of fresh water.
- 7) Repeat this procedure every 24 to 48 hours, depending on the requirements of the type of engine and sizes of air coolers.

GENERAL PURPOSE DEGREASER AND TANK CLEANER

Cleaner 517

Product Description :

A heavy duty solvent emulsifier that is economical and ready to use. Contains petroleum solvents, emulsifiers and surfactants and is used as a tank cleaner or for general degreasing.

Directions for Use and Dose Rates

Cleaner 517 is recommended for local cleaning and degreasing and may be applied by brush hand spray , immersion, soaking or any other conventional means. Apply undiluted over soiled area and allow a contact time of between 15-30 minutes before rinsing off with water.

soak method :

Put parts to be cleaned into a bath of undiluted cleaner 517 .Parts should be soaked for at least 30 minutes before washing off with water.

Spray Method

Spray cleaner 517 undiluted over all soiled areas. Allow time for cleaner 517 to act, between 15-30 minutes, then rinse off with a water hose .For stubborn deposits , agitation by scrubbing will assist the cleaning operation.

Spot Cleaning

Cleaner 517 can be sprayed neat over tank surfaces to be cleaned ,left for at least 30 minutes and up to 2 hours it time allows Using tank washing machines or high pressure hoses ,wash down tank walls .Best results are achieved with hot water between 60^o and 80^oC. Keep stripping tank slops and transfer to holding tank /slop tank.

Circulation method

Cleaning the oil side of lube oil heat exchangers can be accomplished by circulating through with cleaner 517 .

Product properties

Appearance : Clear brown liquid

Density: 0.9g/cm³ at 15°C

Flash point : 63 C (PMCC)

Compatibility:

Metal : No known effect

Rubber: May swell

Synthetic rubber May swell

Features , Benefits and Applications

.Wide application range.

- .Effective on mineral oils and petroleum based chemicals.
- .Powerful solvent with quick penetration and emulsifying properties.
- .Safe to use on most metal surfaces, painted surfaces and tank coatings.
- .Cleans oil coolers ,fuel oil pre heaters , lube oil heat exchangers.
- .Removes oil contamination from machinery and engine room- equipment
- .Soak cleaning of machinery parts.
- .Rapid rinsing, leaves clean oil -free surfaces.
- .Read the Material safety data sheet before using this product.

DISPERSING OIL SPILLS AT SEA AND IN PORT

CLEANER 555

Product Description

cleaner 555 oil spill dispersant is a biodegradable based product with high dispersing efficiency and low toxicity. Approved as a type i dispersant according to LR448 specifications by U.K. ministry of agriculture ,fisheries an food.

Directions for Use and Dose Rates

Oil spills at sea cleaner 555 is used undiluted 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 cleaner 555 and 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

Cleaner 555 should be applied neat by spraying over oiled areas allow time for the oil to absorb the cleaner 555 then follow by washing down the beach or rocks etc. The treatment rate depends on the type 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 cleaner 555 is enough to treat approximately 10 square meters of oil in many cases several applications may be necessary.

Oil spill on deck

Remove as much of the oil as possible then spray cleaner 555 over area covered by the oil and 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 .

Ministry of agriculture , fisheries and food Approval of the use of substances produced for the purpose of treating oil on the surface of the sea Notes for guidance Artical 3 of the deposits in the sea

(exemptoins) order 1985 as read with paragraph 21 of the schedule to it provides that a license is not needed under part 11 of the act to deposit any substance produced for the purpose of treating oil on the surface of the sea provided you meet the following conditions:

.The substance is one the use of which is for the time being approved by the licensing authority.

.The substance is used in accordance with any conditions to which the approval was subject

.No deposits made in an area of the sea . 20 meters or within one mile of any such area , save with the approval of the licensing authority.

.Similarly a license is not needed (if conditions are satisfied) for the loading of a vessel aircraft

Hovercraft, marine structure or floating container in England and Wales with products for deposit for the

treatment of oil on the surface of the sea within British Fishery limits other than waters adjacent to Scotland.

Product properties

Appearance : amber liquid

Density : 0.8 g/cm³ at 15° C

Flash point (PMCC) :above 73 °C

Compatibility

Metal :No known effect

Rubber : Do not use with natural rubber compounds

synthetic rubber : May swell

Features benefits and applications

.Raised standards for operator safety in handling and use being biodegradable and having low toxicity and a high flash point .

.Rapid efficient dispersal of a wide range of oil residues converts hydrocarbons into very fine emulsions.

.Ready to use product.

.Disperses mineral oils crude oils residual fuel oils diesel fuel oil, kerosene, white spirit and lubricant oils.

.For use on oil spills that may occur during loading or discharging of cargo or bunkers where allowed.

.For cleaning of spills on deck ships side ,piers ,wharfs, etc. where allowed.

Read the material safety data sheet before using this product .

For detailed information on safety and health , please refer to , material safety data sheet and/ or product

HEAVY DUTY ALKALINE TANK CLEANER

CLEANER 720

Product Description :

Heavy duty water based alkaline cleaner ,containing specially selected sequestrants and powerful synthetic detergent not suitable for Aluminium, Magnesium and Zinc silicate coatings.

Direction for Use and Dose Rates

Cargo tank cleaning following discharge of drying ,semi drying and non drying natural oils and fats. Immediately after the cargo has been discharged, the tanks should be flushed with cold water to product description synthetic detergents .Tanks should be flushed with cold water to prevent polymerisation and evaporation of the lighter oil fractions.

Whenever possible, the cleaning solution should be heated to 60 - 80 °C. However, the polymerising nature of some natural oils may demand lower cleaning temperatures.

The most economical method of using cleaner 720 is by direct injection followed by recirculation washing, using tank cleaning machines.

If this method is not possible, use other conventional methods such as recirculation, or hand spraying

Can be used for tank sanitizing and deodorizing prior to changing to foodstuffs to achieve the high standard of cleanliness required, a final wash using cleaner 720 will be necessary.

Can be used for cleaning and sanitizing of refrigeration holds, containers and cargo holds.

When changing refrigerated cargoes the need may arise to clean holds to remove animal or vegetable fat and to sanitise and deodorize before the next cargo .

A solution of 5-10 % in fresh water can be used for this purpose ,and may be sprayed on and hosed off using high pressure.

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 : 1. 2g/ cm³ at 15°C

Compatibility :

Metal : Corrosive to aluminium, magnesium, zinc and tin.

Rubber : No known effect

pH(1% vol): 13

Features, Benefits and Applications

- . Suitable for various tank cleaning applications.
- . Highly concentrated economical dilution rate.
- . Rapid penetration and emulsification of vegetable, animal and fish oil residues.
- . Removes fire side deposits in boilers .
- . Non corrosive to ferrous metals and epoxy coatings.
- . Non flammable.
- . Rapid rinsing.
- . Can be used as final treatment for cleaning tanks from black to white or grain.
- . Can be used as heavy duty cargo tank cleaning following discharge of grain semi drying and non-drying natural oils and fats.
- . Can be used for gas-freeing of cargo and fuel oil tanks.
- . Can be used for hydrocarbon freeing of cargo tanks.
- . Can be used for cleaning and sanitizing of refrigerated holds, containers and cargo holds

As of the 1st of July 1996 chemical tankers are only permitted to use tank cleaning agents which are evaluated and approved by the International Maritime Organization IMOS BCH Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals and found to meet the requirements of paragraph 1.8.2 of the P & A standards.

Read the Material safety Data sheet before using this product .

For detailed information on safety and health , please refer to Material Safety Data Sheet and / or product Label .

WATER BASED DEGREASER AND GARGO TANK CLEANER

Cleaner 575

Product Description



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A revolutionary all natural multi-purpose cleaner/degreaser .This water based product is low-toxic, bio-degradable and safe to the persons handling it .Using a natural citrus oil solvent linked with a scientifically advanced surfactant formulation has given a superior high-quality cleaner degreaser.

Directions for Use and Dose Rates

General cleaning

Cleaner575 can be used for all types of cleaning and degreasing and may be applied by brush , handspray 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 1 part to 15 parts of water according to the amount of soil to be removed.

After use as an engine room cleaner, bilge slops must be allowed to separate for at least 3 hours before passing through an oily water separator.

Tank cleaning

Cargo tank cleaning after mineral, animal, fish and vegetable oils.

Hydrocarbon freeing after cleaning with hydrocarbon solvent cleaners like cleaner 535 , tank cleaner

Method of Application and Dose Rate

- 1) Direct injection method into tank washing machines. This will require a solution strength between 0.05 and 0.7 % (0.5- 10 lit/ton wash water).
- 2) Recirculation method of cleaning . Use a solution strength between 0.05 and 0.7 % (0.5-7 litres per ton wash water). This solution can be re-used until no longer effective.
- 3) Spot cleaning Cleaner 575 can be hand sprayed neat or diluted up to 5 parts water and left for about 20-30 minutes before washing off with water.

The best results will be obtained when wash water is heated to 40-60° C.

Tank coating compatibility. Cleaner 575 may be used to clean the majority of properly applied tank coatings . If in doubt , test the cleaner on a small area of tank coating before full scale cleaning starts.

Product properties

Appearance :	brown liquid
Density :	1 g/cm 3 at 15 °C
Flash point :	None (PMCC) ° C
Compatibility :	
Metal :	No known effect
Rubber :	May soften some rubber

Features, Benefits and Applications

- . Water- based degreaser.
- . Low-toxic.
- . Non-flammable.
- . Promotes a pleasant and healthy working cleaner 575 .
- . Splits after cleaning , releasing the oil phase for reclamation .
- . Very economical dilution rate, 1 to 15 parts of water .
- . Cleaner 575 has numerous general marine cleaning & degreasing applications including the
- . removal of greases oil , sludge ,polymer compounds, carbon deposits, general dirt and grime.
- . As an engine room cleaner it is exceptional as not only can it be used for degreasing , cleaning paint work and carbon removal , but also for use in soak tanks, ultra sonic tanks and high pressure cleaning equipment.
- . Accommodation cleaner for bulkheads, decks and toilets, usable on most types of plastics and vinyls.

RUST AND METAL TARNISH REMOVER

Cleaner 645

Product Description

Liquid detergent compound containing phosphoric acid and nonionic surfactants ,used for rust removal and as a surface brightener.

Directions for Use and Dose Rates

Cleaner 645 should always be used in a plastic bucket. Acid should always be added to water, never the reverse . Remove loose dirt , rust scale, oil and grease prior to using cleaner 645.

Apply cleaner 645 to surfaces to be cleaned or pickled as follows:

.For severely corroded surfaces and pickling of welding repairs, use neat 50% solution .

.For less severely corroded or soiled surfaces and tarnish on copper and brass use a solution of 20-50% and rinse off surface after 15-40 minutes with water.

On aluminium , use a solution of 10-30 % but rinse off surface approximately 5 minutes after application.

For removal of rust stains on painted surfaces. A solution of 10-30 % should be sufficient .Rinse off with water 15-20 minutes after application.

.For removal of rust stains on ceramic tiles, enamels, porcelain ,glass, etc.Use a solution of 20-50% depending on stains and soiling .Rinse off with water after 20-40 minutes.

.For removal of cement and lime , apply 50% solution and high pressure wash after 30-40 minutes.

.For removal of flash rust in cargo lines and tanks and discoloration of stainless steel and epoxy coated tanks, recirculate a solution of 5-10% metal Brit H.D. when injected use a 5% solution Recirculate or inject until residue is removed.

Product properties

Appearance: Color less liquid

Density: 1.2g/cm³ at 15°C

PH (10 % solution) : 1.5-2.5

Compatibility:

Metal Long term exposure will cause corrosion of mild steel , cast , iron, aluminium and alloys, brass, tin or galvanized material

Rubber :No known effect

Features, Benefits and Applications



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- . Removes light rust and rust stains.
- . Cleans and passivate ferrous metal surfaces, inhibits further corrosion
- . Removes tarnish from nonferrous metals.
- . Cleans and brightens aluminium.
- . Removes rust stains from painted, ceramic and wooden surfaces.
- . Forms a protective coating on steel surfaces which inhibits further rusting and gives a base to which paint will adhere readily
- . Nonflammable

Read the Material safety Data sheet before using this product

For detailed information on safety and health ,please refer to material safety Data sheet and / or product label .

GENERAL PURPOSE WATER - BASED DEGREASER

Cleaner 730

Product Description

Cleaner730 represents the next generation of multi-purpose cleaning and degreasing agents .Its low in toxic, its non-caustic, free from hydrocarbon solvents and biodegradable, giving complete safety to the persons biodegradable, giving complete safety to the persons handling it . The use of an advanced surfactant formulation with an exceptional solvent power on dirt and oily matters, has resulted in a superior high-quality cleaner / degreaser without the use of unhealthy solvents or caustic.

Direction for Use and Dose Rates

Cleaner 730 can be used for all types of cleaning and degreasing and may be applied by brush handspray 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 Dose Rates

- 1.Direct injection method with tank washing machines: Use dose rate : 0.5-5 liters per ton wash water (0.05-0.5%)
2. Recirculation method :Use dose rate :0.5-7 litres per ton wash water (0.05-0.7%)
3. Spot cleaning : Hand sprayed neat or diluted up to 1-5 parts water and left for about 20-30 minutes before washing off.

Cleaner 730 may be used to clean the coating materials painted or lacquered, surfaces light metal , plastics and textiles.

Product Properties

Appearance : Pale yellow liquid

Density : 1 g/ cm³ at 15°C

Compatibility

Metal : May attack zinc at concentrated solutions

Rubber : No known effect

pH Neat : 12

Features, Benefits and Applications

- .Water-based cleaner.
- .Low-toxic and non - caustic.
- .Biodegradable.
- .Non-flammable.
- .Free from hydrocarbon solvent.
- .Compatible with oily water separators.
- .Splits after cleaning releasing the oil phase for reclamation .
- .Very effective and economical in use.
- .Safe on all materials.
- .Cleaner 730 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 and galley.
- .Suitable for cleaning of soiled textiles as rugs, covers, mats, overalls, etc.
- .Effectively cleans glass fiber boats, hulls and painted surfaces

As of the 1st of July 1996 , chemical tankers are only permitted to use tank cleaning agents which are evaluated and approved by the international maritime organization (IMO) .

cleaner 730 has been evaluated through IMO s BCH working Group on the Evaluation of safety and

pollution Hazards of chemicals and was found to meet The requirements of paragraph 1.8.2 of the P&A standards.

Read the material safety data sheet before using this product.

For detailed information on safety and health, please refer to material safety data sheet and / or product label .

Cleaner 660 Heavy duty oil and grease cleaner

Production description :

Cleaner 660 is a heavy duty compact oil and grease cleaner which can be used for cleaning exterior side of heat exchanger and air cooler and inner side of tubes are contaminated with oil passed into them .
Cleaner 660 has no effect on metal even Aluminum.

Application :

1. poor neat cleaner 660 outside of air cooler wait for two until ten minutes then rinse the surface with water .
2. prepare the 2-10 percent of solution of cleaner 660 and circulate the solution over the outside air cooler for 10 – 20 minutes and then rinse with fresh water.
3. for cleaning inside of tubes prepare the 5 -15 percent solution of cleaner 660 . circulating the solution for 0.5 – 2 hours and drain the solution rinse with fresh water twice , every for 5 minutes.

cleaner 660 cannot affect the descale from water precipitation and is only for oily contamination for water descaled it is better to use powder or liquid descaler .
aware :before using this product study safety material data sheet.

Specification :

Appearance	: pale color
Density	: 1.00 gr / Cm ³
PH	: None
Odor	: Solvent odor
Flash point	: Above 61
Compatibility	:
Metal	: No effect
Rubber	: Swell
Synthetic rubber	: May swell
Package	: 20 and 200 liter metal drum.

CLEANER AND DEGREASER FOR CARGO AND DOUBLE BOTTOM TANKS

CLEANER 535

Product Description

Cleaner 535 is a highly concentrated tank cleaner based on petroleum solvents, emulsifying agent and surfactants.

Cleaning / Degreasing of Boilers

- 1) Find the source of contamination and rectify this problem before starting the cleaning operation.
- 2) The degree of oil contamination will determine the required solution strength. Between 2-20% of cleaner 535 in water is suggested. For heavy contamination, up to a 20% solution may be required, e.g. 2% solution is 20 litres per 1000 litres water.
- 3) Dose the required amount of cleaner 535 through the steam drum manhole. Re-secure steam drum manhole cover. Open vent valve on steam drum. Fill the boiler with water to working level.
- 4) Boiler can now be fired for about 4 minutes and then shut down for 10-20 minutes. Keep repeating this process until the solution has reached a temperature of 50 - 60°C. Continue this operation for 12-18 hours, maintaining the solution at 50 - 60°C which will promote agitation and circulation of liquid to give better cleaning efficiency.
- 5) Drain boiler, then open manhole covers. Use a high pressure hose to flush drums, tubes and headers, starting at the top. After flushing boiler, secure and refill.

Degreasing Marine Diesel Engine Cooling Water Systems .

(This method may be applied when engine is out of service)

- 1) Drain the cooling system and flush with water.
- 2) Calculate the amount of cleaner required for a solution strength of 2% (20 litres per 1000 litres cooling water).
- 3) Refill engine with water adding cleaner 535 .
- 4) Circulate the solution through the system and heat until the water reaches a temperature of about 60 C.
- 5) Continue circulation of the solution through the system for a minimum of 5 hours.
- 6) Drain engine and check the result of the cleaning operation. Repeat cleaning procedure if necessary.
- 7) When cleaning is completed, drain the system, and thoroughly flush with clean water. Refill while adding an anti-corrosion treatment such as DM-130 OR DM-125

Product Properties

Appearance :	Light brown liquid
Density :	0.9g/cm ³ at 15°C .
Flash point :	Above 62 °C (PMCC)
Compatibility:	
Metal :	No known effect
Rubber :	May swell
Synthetic rubber :	May swell

CONCENTRATED LIQUID ALKALINITY BOILER WATER TREATMENT

Alkalinity Control

Product Description

Concentrated liquid alkaline product for corrosion and scale control in boilers.

Directions for Use

Alkalinity control provides the alkaline conditions for hardness control to function correctly.

Without the correct precipitation and subsequent blowdown of hardness salts, 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.

Alkalinity control also provides the alkaline conditions required for corrosion control, by neutralisation of acidic gases.

Dosage

A proper level of treatment is maintained by testing for p-Alkalinity. The level is determined by the pressure and type of boiler. Refer to the dosage tables overleaf for correct dose rates.

The normal method of raising the alkalinity level is by adding the required quantity of Alkalinity Control after testing for p-Alkalinity 225 ml/ton will raise the p-Alkalinity control by 100 PPM.

Dosing Method

For optimum results dose Alkalinity Control direct to the boiler via the bypass pot feeder installed in the boiler feed line.

Product Properties

Appearance: Colourless liquid

Density: 1.3 gr/cm³ at 15° C

pH (1% VOL): 13

Compatibility:

Metal: Corrosive to aluminium, magnesium, zinc and tin.

Rubber: No known effect.

Features , Benefits and Applications

- * Convenient liquid treatment which provides the basic alkalinity on which successful water treatment depends.
- * Maintains alkalinity within optimum limits.
- * Provides optimum conditions for hardness control to function.
- * Assists in precipitation and blow down of magnesium and calcium salts.
- * Neutralizes acid conditions.
- * Allows efficiency to be maintained ,and reduces maintenance.
- * Can be used with most treatment chemicals, in conjunction with a coordinated treatment programme.
- * Will assist in keeping silica in suspension.
- * Simple test to determine level of treatment.
- * Use for providing the required alkaline conditions within the boiler.
- * Can be used in boilers of all pressures.
- * Part of the coordinated treatment programme for boiler systems.
- * Can be used as a neutraliser after acid cleaning operations.

Read the material safety data sheet before using this product

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.

USING THE TABLE:

Select the section corresponding to the pressure of the boiler to be treated and read across the table to obtain the level of treatment required.

Alkalinity control-Dosage- ml/to

Pressure Range	P-Alkalinity test result ppm CaCO ₃								Standard Range PAlkalinity	Initial milliliters / Tonne
	0-60 Dose	60-90	90-100	100-110	110-120	120-150	150+			
0-30 Bar 0-441 Psi	225	110	70	Sat No Does	Sat No Does	Sat No Does	Blow down	Blow down	100-150	280
31-40 Bar 456-588Psi	190	80	60	Sat No Does	Sat No Does	Blow down	Blow down	Blow down	100-130	260
41-60 Bar 603-882Psi	170	80	60	Sat No Does	Sat No Does	Blow down	Blow down	Blow down	100-120	235

225 ml alkalinity control per ton will raise the p-Alkalinity by 100 ppm. Proper treatment should normally give a pH between 9.5 and 11. These are recommended values based on experience and are in no way intended to replace the boiler manufacturers specifications or company regulation.

Sat = satisfactory

All purpose cleaner

AP - 195

Description

AP – 195 is a heavy duty all purpose water based cleaner . with good wetting agent and suitable penetration can clean any surface , machine and have no corrosion on metals even aluminum and no effect on synthetic and natural rubber, it is bio- degradable.

General cleaning

AP - 195 can be used for all type s of cleaning and degreasing and will be applied by brush , spray, immersion and see on. it must be diluted depend on the amount of soil to be removed it may he used for cleaning windows, floor, tank cleaning , duck , engine room.

usage and rose rate

- 1) 0.1-1 % for recirculation and hrs shios
- 2) 1-5 % for immersion
- 3) 0.5 - 0.3 % for cleaning floor windows .

the best result may be obtained when warm water is used. (40 ° - 50 ° c)

product properties

Appearance : green liquid

Density : in gr/ cm 3 at 20 C I.O

Flash point : (pmcc) C NONE

Compatibility :

Metal :No known effect .

Rubber : No known effect

Packagins : 25 , 200 litres .

Features, Bene fits and applications.

- water- based degreaser
- Low toxic
- Non - flammable
- pleasant odor
- bio - diegradable
- Contains wetting agent
- Clean very fast and easily

DM- 6

Product Description

Dm-6 is an alkaline product of boiler feed water treatment to control scale and corrosion.

It is suitable as a phosphate treatment for low hardness feed water in boilers operating at pressures up to 100 bars or 1500 psig .

Product uses

Dm-6 is a special formulation with advanced polymers designed to prevent boiler corrosion , scale formation and sludge accumulation. While phosphate reacts with calcium and magnesium the polymer prevent precipitation of anion and complex on surfaces of heated section and they will be go out by drain

Application , dosage and control.

dm-6 is strongly alkaline the equipment should be constructed of suitably material such as polypropylene PVC, polyethylene, mild steel , cast iron or stainless steel . dm - 6 have a strong reaction with brass, light alloys especially aluminum.

The dosage rate of dm-6 is dependent on boiler operating condition but normally it is 0.6-1 liter per metric tone feed water and must be control by DELARAN ROOZ alkalinity test kit

Dm- 6 is best applied neat or diluted with condensate or evaporated water to any convenient strength on a continuous basis using a suitable chemical pump.

Dm -6 contains potassium hydroxide contact with skin causes serious chemical burns .avoid contact with skin and eye wear goggles and PVC gloves where handling , use glasses keep an eye wash bottle close to the point of use , splashes neat or solution of product on skin or clothing should be washed immediately.

NEUTRALIZER

DESCALER AND ACID

DM - 140

Description :

DM - 140 is a new product that is formulated by Delaran Rooz co. for neutralizing descaler and acid in boilers ,heat exchangers,cooling jacket system in generator and engine and especially for neutralizing descaler

which is remained in the billge after descaling machinerie s section .

DM - 140 is a pink - red solution and when reacts with a acid solution it s color disappears and foam forms.

this two properties shows the existance acid in the system and adding more DM- 140 is necessary.
adding DM - 140 will be stopped when no foam is formed and the color of the solution remains pink - red , it means the acid or descaler is neutralized compeletely and you have enough tim to drain the solution
it is sujested to use DM -140 after using descaler to prevent local corrosion .

Direction for use

a: for boiler heat exchanger and cooling jacket system:

- 1) drain descaler
- 2) circulate 1-3% DM - 140 for 2-4 hours if the pink- red of solution disappeared add 20 liter DM- 140 and continue circulating until the pink –red is unchanged for one hour. itmeans neutralizing is finished.
- 3) drain DM - 140 solution
- 4) wash system with fresh water.
- 5) the system is ready for use

b: neutralizing remain descaler in the billge.

- 1) add gradually DM - 140 to the remained descaler in the billge , pink-red is des appeared and forns wait a moment foam is effaced .
- 3) add some more DM - 140 until no foam is formed and pink - red dose not dis appear
- 4) stop adding DM - 140 now there is a neutraized solution with pink-red color and a PH between 7-10
- 5) you have enugh time to drain the solution.
- 6) after the newtralizing of descaled system by neutralizer DM-140 the fixing PH of the circulating neutralizer about 9 – 10 shows the ending of newtralizing procedure .

Product properties:

appearance: pink - red liquid

Density:in g/ cm³ at 20 c 1.2

Flash point :(PMCC) °c None

PH(1% solution) : 10

Compatibility :

metal : avoid contact with zinc

Rubber :no known effect

package :25 PE drum.

Feature, benefits and applications.

- easy to use
- prevent descaler corrosion
- non toxic.



- water based
- economic
- retard repairing by corrosion

BOILER WATER CONDITIONER (UP TO 16 BAR) DM -115

Product description :

DM -115 is a dry powder containing alkalinity builders , phosphates and sludge conditioners.

Directions for use :

The main attributes of DM - 115 fall into the following categories:

Alkalinity control :The correct level of alkalinity ensures that optimum conditions exist for.Precipitation of hardness salts in conjunction with phosphate.

Neutralisation of acidic conditions.

Avoidance of caustic corrosion.

Control of magnesium and calcium salts.

Hardness control :DM - 115 provides a phosphate reserve to effectively react with and precipitate the hardness salts introduced with the feedwater.

Sludge conditioning: boiler sludge can only be remove by blowdown if it is free flowing. DM -115 will ensure this by preventing the sludge from adhering to metal surfaces.The resulting sludge is composed of small particles flowing towards the bottom of the boiler.

Dosing Methods :

DM - 115 is best dosed by means of a bypass pot feeder directly into the boiler feed line.

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 blowdown,cooled and tested immediately. Follow the Test Kit.

it is important that regular testing is carried out to ensure that treatment levels are correct.

Product dosage and control limits Initial dosage for an untreated system is 400 grams DM - 115 /1000 litres of boiler capacity. this will bring the treatment up to a suitable level of 200 pp p-Alkalinity. The dosage chart given below is for convenience in calculating the amount of DM - 115 required to bring the level to the point between the minimum and maximum (mid point : 200 ppm. p. Alkalinity .)

p. Alkalinity (as ppm caco3)	0	50	100	150	200	225	300	350	400
Dosage of DM - 115 kg/ 1000 l	0.4	0.3	0.2	0.1	0	0	0	blowdown	


Our recommended control limits are :

P-Alkalinity: 100 -300 ppm CaCo3 chlorides : 200 ppm Cl max. Condensate pH 8.3.-9.0 These are recommended values based on experience, and are in no way intended to replace the boiler manufacturers specifications, or company regulations. Excessive chlorides are removed by blowdown.

Product propose:

Appearance :	Tan powder
pH:	In 0.3 wt%
Compability :	
Metal :	Avoid aluminium, zinc tin and their alloys
Rubber :	No known effect

Features, Benefits and Applicatin :

	دفتر مرکزی : تهران، خیابان نواب، خیابان کلهر، پلاک 217، واحد
	16
	تلفن: 66947522 - 66947491 - 66948831 فکس: 66947449 ایمیل: HSF.co64@yahoo.com

Combined conditioning treatment for simplified dosing and handling.
Suitable for use with all auxiliary boilers ; waste heat units; economizers ,package boilers ; smoke and water tube boilers, up to 16 bar pressure.
Boiler kept at peak level efficiency .
Heating surfaces maintained at optimum thermal conditions.
Dispersant action suspends sludge and sediment particles.
Read the Material safety Data sheet before using this product

Benefits and Applications

.Formulated to remove oil, grease and carbon deposits from air coolers and

- scavenging systems.
- .Efficient and economical.
- .May be used for in - service cleaning.
- .Renders surfaces oil- repellent.
- .Maintains and stabilises air cooler efficiency at maximum.
- .Saves time maintenance costs and avoids risks of damage when disassembled.
- .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.

COOLING WATER CORROSION INHIBITOR

DM -130

Product Description

DM -130 is a dry powder based on organic corrosion inhibitor , nitrite , borate for use in closed cooling water systems.

Direction for Use

Cooling water systems must be protected by corrosion inhibitors and DM- 130 is a highly effective for common ferrous and non ferrous metals.

DM -130 makes stable film oxide and prevent corrosion caused by electrolytic action between dissimilar metals used in the system.

DM -130 is no effect on non metal parts like seals, glands packing , hose, gaskets, which used in these systems.

DM -130 is alkaline and will suppress acid corrosion, which would otherwise result in corrosion damage such as pitting. If systems are contaminated with oil or scale there are suitable cleaner for washing systems like cleaner 517 or powder descale and use DM -130

DM-130 can be used with antifreeze if necessary .

NOTE : DM -130 should not be used for Aluminium systems.

Dosing Method

DM -130 should be dosed into a suitable point in the cooling water systems, after it has been thoroughly mixed with water. If the expansion tank is used the adequate circulation must be assured.

Dosing and Control

Initial dosage for an untreated system is 2kg/1000 litres of untreated distilled water .This will bring the treatment up to the minimum level of 1000 ppm.

Necessary equipment to carry out the control tests. The dosage chart give below is for convenience calculating the amount of DM -130 required to bring treatment level to the suitable point between in the minimum and maximum. This being 1440 ppm nitrite .

Normal nitrite limits : 1000-2400 ppm (NO₂) . After a short period of use the operator will be able to easily determine the dosage required to maintain proper treatment level .

nitrite as ppm (NO ₂)	0	180	360	540	720	900	1080	1260	1440	1620-2400
DM-130 kg/ 1000 lit	2.88	2.52	2.16	1.8	1.44	1.08	0.72	0.36	0	0

The pH should be maintained between 8.3 and 10.0 by the treatment.

The engine manufacturer's recommendation for water quality should comply with chloride levels should be as low as possible. Most engine manufacturer recommend a maximum of 50 ppm chloride. It is better to use distilled water as make up.

DM-130 is very soluble. One kilogram of DM-130 should be dissolved in 10 litres of hot water before adding into the systems.

Product Properties

Appearance : Off white powder

pH (0.2 WT %) : 9

Compatibility

Metal Zinc reacts with solutions of DM-130

Rubber No known effect.

Features , Benefits and Application

- Prevent corrosion by creating film oxide.
- Effective against cavitation and erosion .
- No effect on hoses, gaskets and seals
- compatible with glycole based types of antifreeze.
- Simple control tests .
- DM-130 can be used for corrosion inhibition in many types of closed recirculation systems

such as :

- Diesel engine cooling water systems
- Compressor cooling water systems
- Centralised cooling systems.
- Hot water heating systems..

CLEANER AND DEGREASER FOR ALL ELECTRICAL PARTS ELECTRO SOLV

PRODUCT DESCRIPTION

A chlorinated solvent with a controlled evaporation rate, for cleaning and degreasing electrical equipment

Directions for use and dosage rates

Electrical must only be used in sufficiently ventilated areas.

Electrical should always be used neat.

Electrical may be applied 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 Electrical.

The most suitable way of applying electrical is by using hand spray or siphon spray guns .once the deposits of dirt and grease have been flushed away, the remaining solvent should be immediately helped to evaporate by using low pressure ,high volume, clean compressed air .

Never use Electrical on a running generator or motor.

Electrical can be used to clean virtually all electrical equipment and components although it is possible it may affect some types of rubber and plastic ,either remove rubber and plastic parts from component or test on small area for any reaction before cleaning .

After cleaning motors or generators , winding insulation resistance to ground should be tested to check that it is within its specified limits.

PRODUCT PROPERTIES

Appearance : clear colorless liquid

Density : g/cm³ at 20 C : 1.2

Flash point : None

Compatibility :

Metal : No known effect

Rubber : May swell

Features , benefits and applications .

. Rapid penetration and action .

.Powerful solvent with controlled evaporation .

.Efficient cleaning with no grease film or moisture residue.

.Harmless to properly applied electrical insulation .

- .Non - corrosive - can be used on all normal components with no risk of corrosive damage .
- .Cleans and degreases electrical parts and equipment without the need for rinsing .
- .To be used as an alternative to conventional electric cleaners.

Read the material safety data sheet before using this product

For detailed information on safety and health ,please refer to material safety data sheet and / or product label.

LIQUID ACID FOR REMOVAL OF SCALE AND RUST

Descaling liquid

Product Description

Descaling liquid acid containing descaling accelerators, corrosion inhibitors and wetting agents.

Directions for Use and Dose Rates

The most effective descaling is accomplished by circulation for large systems or components. 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, sludge or carbonized oil, then pre-cleaning with Tank cleaner or cleaner 517 is necessary. Descaling liquid should be mixed with fresh water to form a solution of 10-30% depending on the extent of scaling. After using descaling liquid is essential to thoroughly rinse all metal surfaces at least once with a 0.5% solution of Alkalinity Control in fresh water. This will neutralize any remaining acidity and passivate steel surfaces.

Descaling liquid should not be used on aluminium, zinc, tin, or any galvanized surfaces for which a special grade cleaner should be used. Chemical cleaning module Delaran Rooz has developed a 280 litres capacity cleaning module primarily designed for use with chemical acid solvents for descaling boilers, calorifiers, heat exchangers and other types of equipment where rust and scale form.

Descaling boilers, diesel engines, cooling systems, condensers, evaporators, calorifiers, and Heat Exchangers - see Delaran Rooz practical application manual.

product properties

Appearance	: green
Density	: 1.1 g/cm ³ at 15°C
pH(neat)	: < 1.5
Compatibility	:
Metal	: Contains corrosion inhibitor
Rubber	: No known effect
synthetic rubber	: May swell

Features, Benefits and Applications

- *Fast and effective scale remover.
- *Unlimited shelf life.
- *Easy to rinse off.
- *Removes water scale from boilers.
- *Relives scale from diesel engines cooling systems.
- *Removes scale and rust from condensers evaporators and heat exchangers etc.

Read the Material safety Data sheet before using this product

For detailed information on safety and health, please refer to material safety Data sheet and / or product label.

Fuel Stabilizer Fuel care

Product description :

Fuel care is a conditioner / stabilizer and anti sludge for fuel oil in tank.

Product properties :

Fuel care prevents metrification and sedimentation of sludge of fuel oil in tanks.

Providing better separation of water and sediments from fuel oil in centrifuges and a homogenous fuel for combustion. Prevent blockage of filter and lines will be cleaned.

It forms anti corrosion film all over system components and ensures that the system is protected

Direction for use and dose rate:

Ideally Fuel care should be dosed directly into bunker tank prior to bunkering .

It can be added to the settling tank on during transfer from storage .

Dosage rate is one liter fuel care to 8000 liter fuel oil to one liter fuel care to 200 liter / Fuel oil depending on sediment percentage.

ASTM SPOT	1	2	3	4	5
SEDIMENT %	Less 0.05	0.05	0.1	0.2	More 0.5
DOSE RATE	1: 8000	1: 4000	1:2000	1: 500	1:200

IF there is no available test . an initial dose will be 1: 4000 and adjusting would be necessary .

Product properties :

Appearance :pale yellow liquid

Density :0.75

Flash point :above 63

Compatibility :

Metal :no effect

Rubber :may swell

Synthetic rubber may swell

Package :20 liter metal drum .

210liter metal drum .

Features and benefits :

- Disperses sludge ,prevents sedimentation .
- Keeping fuel system clean .
- Less down time , reduce corrosion .
- Prevents filter blockage ,improve injector spray pattern.

FUEL OIL ASH MODIFIER / ANTI CORROSION

Valve care

Product description

Valve care is a blend of organo- metallic compounds and solvent which is formulated to reduce corrosion, deposits formed on exhaust valve seats and turbocharger components.

Valve care modifies ash physically ,and raising the melting point of ash above operating temperature , smaller particle ash and non – adhesive so the ash is exhausted by gas stream.

The greater time for overhaul ,valve cone and seat lives extended.

Valve care reduced acid formation and prevent the formation of sulphur trioxide by catalytic vanadium from sulphur dioxide it means there is no sulphur trioxide to react with steam to form sulphuric acid.

Direction for use and dose rate :

Valve care should be dosed either directly into the service tank or by automatic metering in to the suction side of the booster pumps.

The dosage varies from one liter valve care to 1000 liter fuel oil to one liter valva care to 5000 liter fuel oil according to analyse of fuel oil.

DOSE : 1ltr. Valvecare per : x tons of fuel, see chart

	Vanadium							
	ppm	50	100	150	200	300	400	500
	Tons of fuel							
Sodium ppm	5	4	5	3.5	2.5	1.5	1	1
	35	2.5	5	3.5	2.5	1.5	1	1
	50	2.5	4	3	2.5	1.5	1	1
	65	2	2.5	2.5	2.5	1.5	1	1
	75	2	2.5	2	2.5	1.5	1	1
	85	1.5	2.5	1.5	2.5	1.5	1	1
	100	1.5	2.5	1.5	2.5	1.5	1	1

Example : A fuel contains 50 ppm sodium and 150 ppm vanadium . the dose rate should therefore be : 1 ltr Valvecare per 3 tons of fuel (1: 3000)

Product properties :

Appearance : pale coloured liquid.

Density gr/ : 0.77

Fash point : 63

Compatibility :

Metal : no effect

Rubber : may swell

Synthetic rubber : may swell.

Package : 20 liter metal drum.

210 liter metal drum.

Feature , benfits and application:

- Raising the melting point of sodium – vanadium ash.
- Reduce high temperature corrosion and gultering.
- Keep exhaust valves cleaner .
- Reduce ash deposits throughout the exhaust system
- Extend service time.

POWDER ACID FOR REMOVAL OF SCALE AND RUST

Powder Descaler

Product Description

Powder Descaler 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 or sludge, then pre-cleaning with Tank cleaner or cleaner 517 is necessary.

Depending on the extent of scaling, use a solution of 2.5-10% powder descaler. The solution will have a red colour which changes to yellow when 85% of the acid has been neutralised, whenever possible, the solution should be heated to 60°C. Neutralized solutions can be reactivated by adding more powder descaler until the red colour reappears. This should not be done more than twice. Powder descaler should be used on aluminium. After descaling the fixed pH of descaler solution shows the ending of descaling procedure.

Descaling of Boilers, Descaling of Diesel Engine cooling Systems, Condensers, Evaporators, Calorifiers, Heat Exchangers can be done by powder descaler.

The strength of the acid can be enhanced by adding 1 part sodium chloride (common salt) to 20 parts of powder descaler. If salt is not available, an acceptable alternative is to dissolve powder descaler in sea water. After use of powder descaler a 0.5% solution of Alkalinity control in fresh water should be used for neutralization.

Product Properties

Appearance:	Reddish powder
Density:	1.2g/cm ³
pH (10 wt%):	1.1
Compatibility:	
Metal:	Avoid zinc, tin and their alloys.
	Avoid galvanised surfaces
Rubber:	No known effect

Features, Benefits and Applications

- *Powder product - safe and easy handling and storage.
- *Fast and effective scale remover.**
- *Inhibitors protect metals.
- *Contains anti-foam agent.
- *Colour indicator shows solution strength.
- *Removes scale from boilers.
- *Removes scale from diesel engine cooling systems.
- *Removes scale and rust from condensers, evaporators, heat exchangers etc.

Read the material safety data sheet before using this product

TANK CLEANER AND DEGREASER

Tank cleaner

Product Description

A heavy duty solvent emulsifier, containing petroleum solvents, emulsifiers, and surfactants, Tank cleaner it is used as a tank cleaner or for general degreasing.

Directions for use and Dose Rates .

Tank cleaner is recommended for local cleaning and degreasing and may be applied by brush, hand spray, immersion, soaking or any other conventional means. Apply undiluted over soiled area and allow a contact time of between 15-30 minutes before rinsing off with water.

Soak Method

Put parts to be cleaned into a bath of Tank cleaner, undiluted for heavy soil, for medium to light soiling use a solution of 10-30% Tank cleaner in water. parts should be soaked for at least 30 minutes before washing off with water.

Spray Method

Spray Tank cleaner undiluted over all soiled areas. Allow time for Tank cleaner to act, between 15 and 30 minutes, 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

use with Tank cleaning machines is recommended .

dose rate should be between 0.1 and 2.0% i.e. one to twenty litres per ton wash water .Best results are obtained when water is heated to a temperature between 65°C and 80°C slops should be constantly stripped from the tank and transferred to a holding tank or pumped ashore to slop tanks.

Recirculation method

Used with Tank cleaning machines. it is recommended to use a solution strength of 0.5-3% (i.e. 5 to 30 litres per ton wash water) mixed in the tank to be cleaned. The washing solution is usually 5-10 % of the tank capacity. Best results are obtained when water is heated to a temperature between 65 °C and 80 °C . Dose rate and results will vary depending on amount of contamination and number of tanks to be cleaned with this solution .After cleaning, slop water should be pumped ashore or to ship`s slop tanks.

Spot cleaning

Tank cleaner can be sprayed neat onto surfaces and left for at least 30 minutes. Using tank washing machines or high pressure hoses, wash down the tank surfaces with hot water between 60°C and 80 °C. 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 Tank cleaner .

- 1) Disconnect the heat exchanger s oil inlet and outlet, drain off any remaining oil.
- 2) Connect the discharge side of a portable pump to the lower heat exchanger connection and the suction side of the pump to the bottom outlet of a 200 litre drum
- 3) Complete the circuit by connecting the upper connection on the heat exchanger to the top of the drum.
- 4) Add the required solution to the drum and arrange an immersion heater or live within the drum to raise the temperature of the cleaning solution to 65-75°C and maintain the temperature 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.
- 7) When rinsing is complete, disconnect the water supply and thoroughly drain and dry the heat exchanger.

Product properties

Appearance :	Clear light brown liquid
Density:	9 gr/ cm ³ at 15 ° C
Flash point	(PMCC) °C : Above 62
Compatibility:	
Metal:	No known effect
Rubber:	May swell
Synthetic rubber:	May swell

Benefits and Applications

- * Wide application range- from tank cleaning to heavy duty degreasing.
- * Effective on mineral oils and petroleum based chemicals.
- * Solvent with quick penetration and powerful emulsifying properties.
- * Easy rinse off , leaving clean oil- free surfaces.
- * Safe to use on most metal surfaces, painted surfaces and tank coatings.
- * Cleans oil coolers, fuel oil preheaters and lube oil heat exchangers.
- * Removes general oil contamination from machinery and engine room.
- * **Economical -very low dosage rate**

PURPOSE DETERGENT

General cleaner

Product Description

General cleaner is a superior liquid detergent with good foaming qualities. It contains wetting agents that allow rapid penetration to remove light oil or dirt from any surface.

Directions for use and Dose Rates

Depending on degree of contamination General cleaner should be mixed with warm water at a rate of 50-200 ml per 10 litres, i.e. .1 cup of General cleaner to a bucket of water.

General cleaner solution can be applied simply by mops, brushes or rags or by dipping the soiled articles into the General cleaner solution. After cleaning rinse off with cold or warm water. Due to high foaming properties, General cleaner is not recommended for washing machines.

Product Properties

Appearance: Pale yellow liquid

Density : 1.0g/cm³ at 15°C

Compatibility:

Metal : No known effect

Rubber: No known effect

pH Neat: 8

Features , Benefits and Applications

- . Contains wetting agents.
- . Very economical .
- . Nonflammable.
- . Pleasant odour.
- . Leaves surfaces residue free.
- . Biodegradable and low toxic.
- . 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 paintbrushes.
- . Can be used for cleaning of dishes.
- . Can be used for cleaning of hospitals.
- . Can be used for hand laundry cleaning .

As of the 1st of July 1996 .chemical tankers are only permitted to use tank cleaning agents which are evaluated and approved by the international maritime

organisation (imo) . General cleaner was evaluated through IMO s BCH working Group on the Evaluation

of safety and pollution Hazards of chemicals and found to meet the requirements of paragraph 1.8.2 of the P& A standards.

Read the material safety data sheet before using this product.

For detailed information on safety and health, please refer to material safety data sheet and/ or product labeled

HEVY DUTY SOLENT CLEANER FOR THE REMOVAL OF STUBBORN CARBON DEPOSITS

Carbon clean

Product Description

A powerful non corrosive solvent to break down deposits .

Directions for Use and Dose Rates

Soak method – This the most appropriate way of cleaning deposits from components and machine parts. In order to reduce the evaporation of carbon remover both on the pure product as well as its emulsions a skin is formed when exposed to air.

The items for cleaning are dipped through the seal into the The active solvent. A wire basket can be used for small components Immersion time will depend Upon the nature of the deposits to be removed .Light deposits will be removed in 1 hour whereas heavy oxidised deposits might need overnight soaking.

The components should be rinsed thoroughly before handling.

Cleaning the Oil side of Heat Exchangers

1. Isolate the oil supply disconnect the heat exchanger oil inlet and outlet ,drain off any remaining oil.
2. Connect the discharge side of a portable pump to the lower heat exchanger connection and 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. Add carbon Remover to the drum and heat maintaining the temperature (max 50°C) throught the cleaning operation. If heating is not available the cleaning time will need to be extended
5. Circulate for 12 hours. When the cleaning is complete disconnect the lower heat exchanger connection and drain.
6. Connect a high pressure fresh water supply to the upper heat exchanger connection and drain
7. Disconnect ,drain and dry.

Product Properties

Appearance : Clear brown liquid

Density : 1.0g /cm 3 at 15°C

pH : 11.0

Compatibility

Metal : No kwnown effect.

Rubber : Avoid natural and synthetic rubber

Features Benefits And Applications.

- . Use cold , no heating required.
- . Quickly dissolves deposits containing carbon resins or varnishes.
- . Simple and economical to use.
- . Eliminates need for hard scarping.
- . Non flammable.
- . Removes carbon type deposits from burner tips fuel ingejectors and all components fouled by carbon resin or varnishes.
- . Cleans oil side of fuel heaters oil collers etc.
- . Removes carbon based deposits from fuel oil filters.
- . Can be used for cleaning of : pistons – piston rings – valve cage.

Read the Material safety data sheet before using this

For detailed informaistion on safety and health please refer to Material safety data sheet and / or product label.

SKIN CLEANER Natural Hand cleaner

Product Description

Natural Hand cleaner is an reddish gel skin cleaner containing natural ingredients .This is a new high tech product which can promote good skin condition. it contains no kerrosen it removes the most severe industrial grime, oil and grease in complete safety. Incorporates poly beads to assist removal of the most severe industrial grime.

Directions for use and Dose Rates

Natural Hand cleaner should be massaged onto the soiled skin without the use of water. The skin should then be rinsed with clean water and dried thoroughly with a towel or tissue. Because of the mildness of this product to skin , it may be used for cleaning all areas of the body ,if required.

Product properties

Appearance : reddish gel
Density: 1 g/cm³ at 15 °C
Flash point : (PMCC)° c :Not determinable.
Compatibility:
Metal : No known effect
Rubber: No known effect

Benefits and Applications :

- .Effective and suitable for the most sever soiling . Due to its mildness canbe used safety day after day.
- .Pleasant odor.
- .Mild antiseptic properties.
- .Contains poly beads which act like a light scrubbing brush to assist the cleaning action.
- .Easier to disperse than many other cleaners.

Read the Material safety Data sheet before using this product.

Cleaner 665

Product description

Cleaner 665 is a heavy duty cleaner for coke.

Burnt oil and paint it is very effective for tank cleaning .it is a solvent base compound and has no effect on metals even aluminum.

Usage and rate consumption :

Cleaner 665 can be use clean surface by spray circulat immersion , brush and any convenient equipment if can be used meat or dituted by water depending on contamination.

For dipping a 5 – 20 percent solution can be used for 10 -45 minutes and then rinsing particle .

For circulating , preparct a 2-10 percent solution and circulate for one hour and ther rinse with fresh water.

If there is a heavy contamination use the cleaner 665 neat for 30 minutes and ther rinse the equipment.

Specification

Appearance	: colour
Density	: 1 gr / Cm 3
Flash point	: above 61
Oder	: solvent oder
Compatibility	:
Metat	: No effect
Rubber	: may swell
Synthetic rubber	: may sweel
Package	: 20 and 200 liter metal drum

Turbo Cleaner Granule hard shell of nut

Product description

Granule turbo cleaner consists of hard shell of fruits nut. it works very well and its good descaling and degreasing is based on biting and buring and cleaning the surface of the blades spontaneously. there is no effect on lade surface and no abrasion .

It is friendly enviromently cleaner and has no deposits on blade and burns compeletely it supply good cleaning ,high efficiency without any side effect.

Dosage :

It must be used according to the instruction of turbo manufacturer.

Product properties :

Appearance : Brown granule .

Density (balk) : 0.67 gr / Cm³

Flash point : None

Boiling point : None

Compability :

There is no effect on all material

Package : 25 kg bag

Features , benfits, and application:

- easy to use
- planet source
- excellent cleaning
- high efficiency
- no side effect
- buring compeletely

Cleaner 622 Turbo cleaner

Product description

Cleaner 622 is a new formulation ,water based and ashless for cleaning the turbo s blades .

It can be used for online and offline situation it is an non-corrosive and suitable descaling and degreasing agent for blades .

If cleaner 622 is used regularly ,it would provide a high efficiency and long period of over haul .

Direction for use and dose rate :

- if there is no available deionized or distilled water ti is better to supply dilluted cleaner 622 and use it directly .
- if it is supplied concentrated, prepare a 10-25 percent solution with deionized water and inject it to the turbo .
- it is recommended to use cleaner 622 daily or regularly based on working hours .

Product properties :

Appearance : colourless .
Density : 1.01 gr / Cm3
Flash point : above 71
Freezing point : -6.5
Boiling point : 101
Ash content : less than 0.008%
PH (%1) : 7

Compatibility :

Metal : No effect
Rubber : No effect
Synthetic plastic : No effect
Package : 20 , 210 Polyethylene drum
Shelf life : 2 years

Feature, bene fits, and application :

- Concentrated liquid
- Water base formulation
- Ashless
- Supply high efficiency .
- Easy to use
- Strong cleaning

GENERAL STRONG ALKALINE CLEANER

Cleaner 640

Product Description

Cleaner 640 is a heavy duty water-based cleaner for use as a tank cleaner or general degreasing .It contains wetting agents and alkaline materials.

Directions for Use and Dose Rates

General cleaning

Cleaner 640 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.

Tank cleaning

Cargo tank cleaning to remove residues of mineral, animal, vegetable or fish oil, waxes and soot from inert gas systems.

Method of Application and Dose Rates

1. Direct injection method for tank washing machines: Dose rate 1-5 litres per ton wash water (0.1-0.5%)
2. Recirculation method : Dose rate 1-7 litres per ton wash water(0.1-0.7%)
3. Spot cleaning : Handspray 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.
 1. Spray cleaner 640 on with a high pressure cleaning machine and use 1:6 with water
If used with handsprayer , spray the product neat onto the surface, allowing 1 litre for every 12 m² use a 5-8% solution in a tank washing machine.
 2. Leave for about 30-40 minutes the surface should be keep wet.
 3. Wash down with hot water (50°C) and check the cargo tank
 - 4- Repeat the procedure if necessary

SELF- SPLITTING ENGINE ROOM AND CARGO TANK CLEANER SUPER CLEANER

Product Description

Super cleaner is an all- purpose degreaser with self- splitting emulsifiers, used for engine room and cargo tank cleaning . It allows the slop water to break into separate oil and water phases.

Directions for use and Dose Rates

Super cleaner is recommended for local cleaning and degreasing of engine rooms, bilges and tank tops. It may be applied by brush, spray , immersion, soaking , or any other conventional means. Super cleaner is used neat . Allow a residence time of at least 30 to 60 minutes where possible , to ensure good penetration.

Wash down all surfaces using hot water if possible and high pressure water jet.

The emulsion residue after cleaning must be allowed to separate in a holding tank for at least 3 hours before passing through an oily water separator.

To achieve the best results from the splitting action of super cleaner it is important that no other type of detergent cleaner is used in the engine room.

Cargo Tank cleaning after Mineral oils

1) Direct injection method into tank washing machines is recommended for this product. A dose rate of between 0.1 and 3.0% i.e. one to thirty liters per ton wash water. Best results are obtained when water is heated to a temperature between 65 C and 80 C . Slops should be constantly stripped from the tank and transferred to a holding tank.

Allow slops to settle and break the time for this will vary depending on amount of super cleaner used and type of oil being cleaned . In most cases ,12 hours should be sufficient before the water phase can be removed.

2) Spot cleaning .Super cleaner can be sprayed neat over the tank surfaces to be cleaned left for at least 30 minutes and up to 2 hours if time will allow. Using tank washing machines or high pressure hoses wash down tank walls .Best results are achieved with hot water between 60C

and

80 C .keep stripping and transfer to holding tank / slop tank and allow time for slops to break before removing the water phase.

As of the 1st of July 1996 chemical tankers are only permitted to use tank cleaning agents which are evaluated and approved by the International maritime organization(IMO) .super cleaner was evaluated through IMO s BCH working Group on the Evaluation of safety and pollution Hazards of chemicals and found to meet the requirements of paragraph 1.8.2 of the P&A standards.

Product properties

Appearance :	Clear brown liquid
Density :	0.8g/cm ³ at 15 °C
Flash point (PMCC):	Above 66 °C
Metal :	No known effect
Rubber :	Do not use with natural rubber compounds
Synthetic rubber :	May swell

Features, Benefits and Applications

- .Works in conjunction with oily water separators to meet current IMO regulations.
- . Highly effective economical solvent cleaner.
- . Rapid penetration.
- . Slop emulsions break into two distinct phases.
- . Allows oil residues to be reclaimed.
- . Reduces disposal costs and associated problems.
- . Low toxicity, non corrosive.
- . Used for general cleaning of machinery spaces, bulkheads, decks, bottom plates and any oil /grease soiled areas.
- . Should be used where slops are required to pass through oily water separators.
- . Used for cargo tank cleaning of mineral oils and petroleum based chemicals .

Read the Material safety Data sheet before using this product

For detailed information on safety and health, please refer to Material Safety Data Sheet and/ or Product Label.