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Dealing In : • Fuel Additives • Water Treatment Plant & Chemicals • Lubricants • F.O. / L.D.O. / LSHS

PRODUCT INFORMATION

VISIPERSE – 1573 (HH) ***(Corrosion and Scale Inhibitor)***

PRODUCT DESCRIPTION

VISIPERSE – 1573(HH) is an advanced trifunctional synthetic liquid formulation designed to control corrosion, scaling and inorganic fouling in recirculation cooling water. Product is suitable up to 1500ppm hardness in recirculating water.

BENEFITS

VISIPERSE – 1573(HH) contains balanced blend synergism of anodic, cathodic and film forming inhibitors, sequestrant, scale retardant and dispersant. It does not revert to orthophosphate. It can work over wide range of pH and temperature. It does not create pollution problem. ***VISIPERSE – 1573(HH)*** is not nutrient for micro-organism.

PRINCIPLE USES

VISIPERSE – 1573(HH) is designed to prevent corrosion of multi-metal system, hard scales and metal oxides deposits in recirculation water system.

RECOMMENDED DOSAGE & APPLICATION

When used at a ppm level in recirculating system, ***VISIPERSE – 1573(HH)*** provides excellent corrosion and scale inhibition ***VISIPERSE – 1573(HH)*** can be conveniently dosed directly from its container.

TYPICAL SPECIFICATION

| | | |
|-------------------|---|---|
| Appearance | : | Pale Yellow Liquid |
| Specific Gravity | : | 1.10 ± 0.05 gm/ml |
| pH of 1% Solution | : | Acidic |
| Solution | : | Miscible with water in all proportions. |

HANDLING

VISIPERSE – 1573(HH) must be handle with care. Contact with eyes, skin and clothing should be avoided. In case of contact wash the affected area with warm soapy water.

PACKING

50kgs. HDPE Carboys.

PRODUCT INFORMATION

VISIPERSE – 1573(MH) (*Corrosion and Scale Inhibitor*)

PRODUCT DESCRIPTION

VISIPERSE – 1573 (MH) is an advanced trifunctional synthetic liquid formulation designed to control Corrosion, scaling and inorganic fouling in recirculation cooling water. Product is suitable up to 600ppm hardness in recirculating water.

BENEFITS

VISIPERSE – 1573 (MH) contains balanced blend synergism of anodic cathodic and film forming inhibitors, sequestrant, scale retardant and dispersant. It does not revert to orthophosphate. It can work over wide range of pH and temperature. It does not create pollution problem. **VISIPERSE – 1573(MH)** is not nutrient for micro-organism.

PRINCIPLE USES

VISIPERSE – 1573 (MH) is designed to prevent corrosion of multi-metal system, hard scales and metal oxides deposits in recirculation water system.

RECOMMENDED DOSAGE & APPLICATION

When used at a ppm level in recirculating system, **VISIPERSE – 1573(MH)** provides excellent corrosion and scale inhibition **VISIPERSE – 1573(MH)** can be conveniently dosed directly from its container.

TYPICAL SPECIFICATION

| | | |
|-------------------|---|---|
| Appearance | : | Clear Liquid |
| Specific Gravity | : | 1.15 ± 0.05 gm/ml |
| pH of 1% Solution | : | Acidic |
| Solution | : | Miscible with water in all proportions. |

HANDLING

VISIPERSE – 1573(MH) must be handle with care. Contact with eyes, skin and clothing should be avoided. In case of contact wash the affected area with warm soapy water.

PACKING

50kgs. HDPE Carboys.

PRODUCT INFORMATION

VISIPERSE – 1573 (LH) ***(Corrosion and Scale Inhibitor)***

PRODUCT DESCRIPTION

VISIPERSE – 1573 (LH) is an advanced trifunctional synthetic liquid formulation designed to control corrosion scaling and inorganic fouling in recirculation cooling water. Product is suitable for make up water is soft / R.O. Water and recirculating water up to 300ppm hardness.

BENEFITS

VISIPERSE – 1573 (LH) contains balanced blend synergism of anodic, cathodic and film forming inhibitors, sequestrant, scale retardant and dispersant. It does not revert to orthophosphate. It can work over wide range of pH and temperature. It does not create pollution problem. ***VISIPERSE – 1573 (LH)*** is not nutrient for micro-organism.

PRINCIPLE USES

VISIPERSE – 1573 (LH) is designed to prevent corrosion of multi-metal system, hard scales and metal oxides deposits in recirculation water system.

RECOMMENDED DOSAGE & APPLICATION

When used at a ppm level in recirculating system, ***VISIPERSE – 1573 (LH)*** provides excellent corrosion and scale inhibition ***VISIPERSE – 1573 (LH)*** can be conveniently dosed directly from its container.

TYPICAL SPECIFICATION

| | | |
|-------------------|---|---|
| Appearance | : | Clear Liquid |
| Specific Gravity | : | 1.10 ± 0.05 gm/ml |
| pH of 1% Solution | : | Acidic |
| Solution | : | Miscible with water in all proportions. |

HANDLING

VISIPERSE – 1573 (LH) must be handle with care. Contact with eyes, skin and clothing should be avoided. In case of contact wash the affected area with warm soapy water.

PACKING

50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISICIDE – 1773 **(Microbiocide)**

PRODCUT DESCRIPTION

VISICIDE – 1773 is a broad spectrum and microbial product designed for use in industrial recirculating cooling water system.

BENEFITS

The active ingredient in **VISICIDE – 1773** is effective at low concentration and it is inert to most organic and inorganic compounds.

VISICIDE – 1773 effectively controls algae and slime forming organisms.

VISICIDE – 1773 may be used in systems operating under wide range of pH and is effective even at elevated temperatures.

VISICIDE – 1773 is non-volatile and is not lost from the system by evaporation.

VISICIDE – 1773 is non-corrosive and will not affect any part of the equipment.

VISICIDE – 1773 is a liquid formulation and hence easy to handle.

VISICIDE – 1773 is also a surfactant and has a cleaning effect on the fouled surfaces.

PRINCIPLE USES

VISICIDE – 1773 can be used very effectively for prevention of algae, bacterial and fungi growth in all types of industrial water systems used in plants such as fertilizer complexes, refineries, petrochemical units, air conditioning and refrigeration plants etc.

RECOMMENDED DOSAGE & APPLICATION

For initial use in water systems, which have been already fouled up to considerable extent (where algae and other bacterial growth is already present), a higher concentration of **VISICIDE – 1773** will have to be used.

For regular and continuous application (where initially no algae and other bacterial extensive growth is present), a lesser concentration will give satisfactory result.

TYPICAL SPECIFICATION

| | | |
|------------------|---|---|
| Appearance | : | Light pale yellow liquid |
| Specific Gravity | : | 1.05 ± 0.05 gm/ml |
| pH | : | 4.0 - 7.0 |
| Solubility | : | Miscible with water in all proportions. |

HANDLING

Contact with eyes, skin and clothing should be strictly avoided. If the material is swallowed, seek medical advice immediately.

PACKING

50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISICIDE – 1693 (Algaecide)

VISICIDE – 1693 is a synergistic blend of speciality biocides and a stabilized chlorine donor for most effective treatment of circulating waters. It is not only effective against the algal growth, but also controls the fungal and bacterial boom; the former grows on the dead microbes in circulating water systems. Cyanobacterium, green algae, red algae, and brown algae are the four main types of algae, amongst hundreds of species, found in water systems, which can be easily controlled by using **VISICIDE – 1693**. The green-blue algae, Cyanobacterium, grows in slimy sheets, which can coat the sides of tanks and the surfaces of coils. They can double in population in every twenty minutes under favourable conditions and produce very dense mucoid sheets. The conditions, which appear to be favourable for this type of algae, are water that has high alkalinity due to excessive calcium or magnesium, a high phosphate level, and a high nitrate level. The slime formation is brought under control by chlorine released from **VISICIDE – 1693**. The brown algae are found in almost closed water tank systems, which have low entry of light, having good nutrient supply and high silicate levels. Well-waters generally provide these ingredients for such algal growth. Wherever seawater is used for heat-control by circulation, such as big complexes near shores **VISICIDE – 1693** is ideal for treatment and control of microbes, which get deposited in the cooling coils, reducing the heat transfer efficiency.

VISICIDE – 1693 also exhibits a broad-spectrum germicidal potency and has lasting residual properties. At proper dosage of treatment, the primary disinfecting action inactivates the algae by oxidation of the cell-nuclei by chlorine, which is released from **VISICIDE – 1693** and the secondary disinfection ensures residual protection, in order to control the regrowth of the algae. As compared to other treatment chemicals, which due to the formation of by-products or delayed actions show varying results, **VISICIDE – 1693** shows no variations and practically no immune-resistance. **VISICIDE – 1693** is more stable than chlorine in gaseous form or other compounds releasing chlorine, easy to handle and much effective than primary hypochlorites, wherein there is no control on available chlorine. It also provides protection against a practically whole range of bacteria and effective towards a few parasites too. It is a liquid, miscible in water in all proportions and therefore easy to handle. It is Biodegradable. When used along with **VISICIDE** microbiocides, it establishes total control over the circulating water quality.

Features:

- Easy to handle
- Stabilized chlorine donor
- Broad Spectral activity against algae
- Miscible in water in all proportions
- pH maintained
- Cost effective
- Treats and controls further fungal and bacterial growth
- Forms no by-products
- Non-toxic to human
- Non-corrosive
- Biodegradable

Uses

In circulating cooling Towers, Chilling Plants, Garden fountains, Scrubber Towers, Wastewater treatment plants for controlling the pathogenic bacterial growth. The use of **VISICIDE – 1693** is to be restricted where quats are being used.

Dosage

Generally 30ml-50ml of **VISICIDE – 1693** as supplied per 1000 ltr of water, thrice a weak, or as and when required, depending on the operating condition of the system and nature of water. Shock dose could be double.

Technical Data

- Color : Practically colourless clear liquid
- Odor : Mild
- Active Ingredients : Stabilized chlorine donor and blend of speciality Biocides
- pH : 12- 13.8
- Biodegradable : Yes
- Storage : Stable for 6 months from the date of manufacture

Microbial activity against:

| Bacteria | Moulds | Algae |
|---|--|--|
| Lactic acid bacteria <i>Pseudomonas</i> sp. <i>Salmonella</i> sp. <i>Staphylococcie</i> sp. <i>Streptococcie</i> sp. <i>Enterobacteria</i> sp. | <i>Aspergillus</i> sp. <i>Paecilomyces variotii</i> <i>Penicillium funiculosum</i> | <i>Cyanobacteria</i> <i>Green algae</i> <i>Red algae</i> <i>Brown algae</i> |

PRODUCT INFORMATION

VISICIDE – 2783

(Microbiocide)

PRODUCT DESCRIPTION

VISICIDE – 2783 is a broad-spectrum anti - microbiological product designed for use in industrial recirculating cooling water systems. **VISICIDE – 2783** is very effective on TVC, SRB, Nitrifying and Iron bacteria.

BENEFITS

VISICIDE – 2783 effectively controls all types of algae such as yellow, green, blue green, brown red or reddish green, bacteria, fungi, yeast etc. it is inert to most organic and inorganic compounds.

VISICIDE – 2783 is non-volatile and is not lost from system by evaporation.

VISICIDE – 2783 is non-corrosive and will not effect any part of the equipment.

VISICIDE – 2783 is stable over wide range of pH. It is a liquid formulation and easy to handle.

PRINCIPLE USES

VISICIDE – 2783 can be used very effectively for prevention of bacteria, fungi and algae growth in all types of industrial water systems used in plants such as fertilizers complexes, refineries, petrochemicals units, air conditioning and refrigeration plants etc. **VISICIDE – 2783** is not suitable for use in potable water supplies. It can be safely used in conjunction with corrosion / scale inhibitors.

RECOMMENDED DOSAGE & APPLICATION

The amount of **VISICIDE – 2783** required would depend upon the type of systems, the nature and the extent of microbiological contamination and the degree of control required. **VISICIDE – 2783** is normally dosed directly from the container to the cooling tower sump or to the inlet of the condenser / heat exchanger.

TYPICAL SPECIFICATION

| | | |
|------------------|---|--|
| Appearance | : | Colourless to light pale yellow liquid |
| Specific Gravity | : | 1.05 ± 0.05 gm/ml |
| pH | : | Acidic |
| Odour | : | Mild |
| Active Component | : | Mixture of Isothiazolinones |
| Solubility | : | Miscible with water in all proportions |

HANDLING

Contact with eyes, skin and clothing should *be* strictly avoided.

ENVIRONMENTAL CAUTION

VISICIDE – 2783 is toxic to fish. Do not use in potable water may occur.

PACKING

50kgs / 35 kgs HDPE Carbouys.

PRODUCT INFORMATION

VISIPERSE – 2563

(Antiscalent & Sludge Conditioner for Boiler)

PRODUCT DESCRIPTION

VISIPERSE – 2563 is synergistic blend of antiscalent and sludge conditioner. It is specially designed for controlling scale of alkaline earth metals and consequently it promotes the suspension of insoluble salts.

BENEFITS

VISIPERSE – 2563 is thermally and hydrolytically stable, hence it can work over wide range of pH temperatures. It possesses multiple properties like sequestration, threshold inhibition, dispersion, corrosion inhibition etc. It keeps the boilers remarkably clean by forming soluble complexes with calcium and magnesium. It keeps the sludge in dispersed condition. Thus, sludge will be carried with blow-down.

PRINCIPLE USES

VISIPERSE – 2563 is an effective scale inhibitor for water born scales of CaCO_3 , CaSO_4 , MgSO_4 , Ca and Mg phosphates and Silicates scales.

VISIPERSE – 2563 removes existing scales & prevents scale deposition.

VISIPERSE – 2563 can work in conjunction with oxygen scavenger, antifoaming agent and corrosion inhibitor etc.

RECOMMENDED DOSAGE & APPLICATION

A dose in ppm in boiler feed water provides excellent results. The optimum level will depend on specific plant operating conditions and type of water. *VISIPERSE – 2563* may be conveniently dosed directly from the container or diluted with water to any convenient strength for dosing through existing equipments.

TYPICAL SPECIFICATION

| | | |
|----------------|---|---------------------------------------|
| Appearance | : | Colourless to pale yellow liquid |
| Density | : | 1.10 ± 0.05 gm/ml |
| pH of 1% soln. | : | 7 – 9 |
| Solubility | : | Soluble in water with all proportions |

TOXICITY

VISIPERSE – 2563 is slightly toxic to ingestion, practically nontoxic by dermal application, moderately irritating to the skin and corrosive to the eyes.

HANDLING

Care should be taken to avoid contact with skin & eyes. In case of contact, flush the affected areas with plenty of water. Goggles and rubber gloves should be used at all times, when working with concentrated material.

PACKING

50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISICOR – 973

(Oxygen scavenging, corrosion control agent)

PRODUCT DESCRIPTION

VISICOR – 973 a multi purpose liquid product used for phosphate conditioning, chemical deoxygenation, and sludge conditioning of boiler feed water.

BENEFITS

The optimum blends of chemicals in **VISICOR – 973** provides the following important benefits.

1. Prevents formation of hard Calcium Phosphate & Silicate scale in both high & low pressure Boilers.
2. Controls localized corrosion by spontaneously reacting with dissolved oxygen as product is having unique catalyst.
3. Conditions sludge to prevent deposition and provide easy removal by normal blowdown.
4. Minimize Boiler maintenance, down time and cleaning costs.

PRINCIPLE USES

VISICOR – 973 is specially developed for internal treatment of Industrial boilers operating up to a pressure of 900 p.s.i. Where softened water is used for boilers feed. The catalyzed oxygen scavenger present in **VISICOR – 973** reacts with dissolved oxygen 20 to 50 time faster than the commercial uncatalysed oxygen scavengers and hence complete removal of oxygen can be achieved in a matter of seconds,

RECOMMENDED DOSAGE & FEEDING

The amount of **VISICOR – 973** required for any particular installation will depends upon factors such as the residual hardness and amount of dissolved Oxygen in feed water, the amount of water evaporated and the type of boiler. Our experts will recommend the dosage which can be prepared in soft water or condensate with stirring.

$$\text{Dosage required in ppm} : \frac{500}{C}$$

C = Concentration factor in boiler system.

TYPICAL SPECIFICATION

| | | |
|--------------------|---|---|
| Appearance | : | Colourless to pale yellow viscous liquid. |
| Specific Gravity | : | 1.15 ± 0.05 gm/cc |
| pH of 1 % solution | : | 6 – 8 |
| Solubility | : | Soluble in water with all proportions. |

BLOW DOWN

It is essential to blow down the boiler every shift to ensure complete removal of sludge from the entire system. This will also prevent the total dissolved solids from exceeding the prescribed limits.

RECOMMENDATIONS

1. Boiler feed temp, to be maintained above 75°C
2. Boiler feed hardness should be less than 5 ppm.

HANDLING

VISICOR – 973 is not a hazardous chemical although it may irritate sensitive skin in such an incidence wash the affected area with cold water immediately. Use rubber gloves, goggles or face shields while handling **VISICOR – 973**.

PACKING : 50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISMINE - 943 **(Acid Corrosion Inhibitor)**

PRODUCT DESCRIPTION

VISMINE – 943 is an Organic, liquid, acid corrosion inhibitor especially designed to inhibit the attack of hydrochloric acid on iron and steel during industrial cleaning operations.

PRODUCT APPLICATION

VISMINE – 943 is used with 5 to 10% hydrochloric acid which is widely in use for following applications.

1. Removal of lime deposits or water born Scale in boiler, piping systems and evaporating equipments.
2. Removal of scales and deposits from equipment in refineries, paper mills, chemical plants and other industries.
3. During acidization of oil wells.
4. Pickling and cleaning operations

TYPICAL SPECIFICATION

| | | |
|------------------|---|---------------------|
| Appearance | : | Amber Colour liquid |
| Specific Gravity | : | 0.99 ± 0.02 |
| pH | : | 3.0 – 5.0 |

DOSAGE

The dosage recommended varies from 0.1% to 0.4% w/v which depends upon operational parameters.

PACKING

50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISISPERSE – 1511 C

(Polymer scale inhibitors and dispersants for membrane separation processes)

INTRODUCTION

Membrane systems demand high performance scale inhibitors to treat industrial water and allow the most efficient production of potable water from brackish water or sea water. **VISISPERSE – 1511 C** an efficient water treatment polymer is now available for preventing scale and deposits on membranes in separation applications such as reverse osmosis (RO) and nano-filtration. The features and benefits of **VISISPERSE – 1511 C** is listed below :

FEATURES AND BENEFITS

| FEATURE | BENEFIT |
|--|--|
| VISISPERSE – 1511 C inhibit scale common to RO system such as Calcium Carbonate and Calcium Sulfate with little or no acid control required. | Inhibiting scale formation prolongs membrane life and lengthens the time between membrane cleanings. System efficiency is maximized by maintaining excellent permeate flow and % recovery. |
| Products meets UL classification and European drinking water approvals | Polymer can treat potable water in RO and thermal desalination systems. |
| VISISPERSE – 1511 C contains preservative | Preservative prevents microbiological growth in storage tanks |
| VISISPERSE – 1511 C polymer is thermally and chemically stable | Polymer is stable under all membrane water conditions and can be formulated with preservatives and other common water treatment chemicals |

TYPICAL SPECIFICATION

| | | |
|----------------|---|---------------------------------------|
| Appearance | : | Clear to slightly hazy liquid |
| Type | : | Carboxylate polymer with preservative |
| % Total solids | : | 35 |
| pH | : | 4.0 |

TECHNOLOGY BACKGROUND

Scale inhibition and deposit control are essential for maintaining efficient and cost effective membrane operations such as RO systems. **VISISPERSE – 1511 C** is high performance scale inhibitor offered to the water treatment industry to maintain clean and longer lasting membranes in separation processes. Deposits on membranes can reduce permeate flow and increase pressure drop, greatly minimizing % recovery (yield) of the system. Hard scales can puncture membranes, allowing salt passage and microbiological contamination in the permeate. Also scale and deposits may cause channeling through membranes, thereby limiting flow to less scaled areas. Channeling reduces system efficiency and prevents effective cleaning of the scaled membranes.

RO (also called hyper-filtration) applies pressure to reverse the natural flow of pure water through a semi-permeable membrane between solutions containing different salt concentrations. In order to generate pure water from salt water, the applied pressure must be greater than the difference in osmotic pressure between the two waters. RO removes all dissolved organic (non ionic) solids with molecular weight above 100 daltons as well as a high percentage of ionic materials (typically 90 to 99%).

Nano-filtration is another membrane technology that has many of the same scale problems as RO. It is an intermediate process between RO and filtration, and has a molecular weight cut-off (MWCO) in the range between 400 to 800 daltons. Ionic rejection varies depending upon the valence of the salts. Other membrane separation techniques include ultra-and micro-filtration which filter colloids and suspended solids.

The amount and quality of the produced pure water (permeate) is frequently limited by the presence of scale forming salts in the raw feed water. These salts tend to precipitate as their concentration increases at the membrane surface during the separation process. If solubility limits are exceeded, scale forms and a cleaning cycle is required to restore membrane permeability and flux. Cleaning is costly in terms of time and chemicals.

Scale inhibitor such as **VISISPERSE – 1511 C** polymer increase the critical concentration above which crystallization occurs. Since scale can form from different salts (e.g. CaCO_3 , CaSO_4 , Silica and Iron), scale inhibitor must be carefully chosen to match the scaling tendency of each specific water.

TYPICAL ADVANTAGE

VISISPERSE – 1511 C have been specifically developed to target the scale common in membrane systems. This product is carboxylate based polymer and is excellent scale inhibitor. **VISISPERSE – 1511 C** polymer will also disperse colloids and fine particles so the solids can be flushed through the system with the waste stream, avoiding deposition on membrane surfaces.

VISISPERSE – 1511 C is a general purpose scale inhibitor and dispersant, particularly effective on calcium carbonate, calcium sulfate, barium sulfate and other low solubility salts. This product complies with the requirements of UL classification for drinking water treatment additives in accordance with ANSI/NSF standard 60. **VISISPERSE – 1511 C** contains a preservative to prevent microbiological growth during storage.

The tables below compare the product efficacy of the **VISISPERSE – 1511 C** polymer with competitive products for inhibiting calcium carbonate and calcium sulfate. The higher the induction time, the better the scale inhibitor.

**POLYMER PERFORMANCE – CALCIUM CARBONATE INHIBITION
(INDUCTION TIME BEFORE PRECIPITATION)**

| PRODUCT (10ppm polymer solids) | INDUCTION TIME (MINUTES) BEFORE CALCIUM CARBONATE PRECIPITATION | |
|-------------------------------------|--|---|
| | (600ppm CaCO ₃ , pH 9.2, 25 ⁰ C) | (2000ppm CaCO ₃ , pH 7.6, 40 ⁰ C) |
| No polymer | 0 | 0 |
| VISIPERSE – 1511 C | 16.5 | 14.5 |
| Competitive scale inhibitor A | 11.0 | 7.5 |
| Competitive scale inhibitor B | 13.5 | 13.5 |
| Competitive scale inhibitor C | 2.0 | 4.0 |

**POLYMER PERFORMANCE – CALCIUM SULFATE INHIBITION
(INDUCTION TIME BEFORE PRECIPITATION)**

| PRODUCT (5ppm polymer solids) | INDUCTION TIME (MINUTES) BEFORE CALCIUM SULFATE PRECIPITATION | |
|------------------------------------|---|---|
| | 6800ppm Ca as CaCO ₃ , 30 g/l Na ₂ SO ₄ (25 ⁰ C) | 6800ppm Ca as CaCO ₃ , 20 g/l Na ₂ SO ₄ (40 ⁰ C) |
| No polymer | 1.0 | 0.0 |
| VISIPERSE – 1511 C | 12.0 | 11.0 |
| Competitive scale inhibitor A | 10.0 | 5.5 |
| Competitive scale inhibitor B | 10.5 | 4.5 |
| Competitive scale inhibitor C | 4.5 | 1.0 |

PRODUCT USE

The choice and dosage level of **VISIPERSE – 1511 C** will depend on the analysis of the feed water and on the plant design and operating conditions. Typically, dose rates will vary from 4 to 30ppm (as is) in the feed water. It should be injected continuously in the neat form directly from the drum, or diluted with softened water before use. The diluted solution should be either used within one day or preserved with a suitable preservative package.

HANDLING

VISIPERSE – 1511 C is stable for two years if kept in their original containers under normal storage conditions. When the container is opened the product should be used within one month.

PRODUCT INFORMATION

VISICLEAN - AC

(Cleaning chemical for Reverse Osmosis)

INTRODUCTION

VISICLEAN – AC is a unique blend of penetrants, surfactants and polymeric dispersants to help clean up biofouled reverse osmosis system to maximize the efficiency.

BENEFITS

1. KEEP SYSTEM CLEAN

VISICLEAN – AC cleans RO membrane fouled by organic accumulations and also colloidal matters and silt. **VISICLEAN – AC** penetrates and disperses organic deposits and improves the performance.

2. ENHANCES MICROBIOCIDE EFFECTIVENESS

VISICLEAN – AC improves the performance of biocides by helping them penetrate in masses. This results in a quicker and more complex kill as well as reduced biological growth.

3. DISPERSES FOULANTS

VISICLEAN – AC disperses deposits of silt, clay, iron oxide, organic and dead biological matter. Thus it improves system cleanness resulting in increased permeate flow, reduced pressure drop across the tune and minimizes biofouling.

4. ALLOW EFFECTIVE SYSTEM CONTROL

VISICLEAN – AC keep membrane surfaces clean to reduce the fouling tendency. This efficient performance can be achieved at much lower dosage.

APPLICATION AND DOSAGE

VISICLEAN – AC can be used for online as well as offline cleaning.

VISICLEAN – AC can be dosed on line prior to cartridge filter.

For offline cleaning **VISICLEAN – AC** dilution ratio is in the range of 0.5% - 3.0% in proportion to the total volume of the cleaning system and piping.

SPECIFICATION

| | | |
|--------------|---|-------------------------------------|
| Appearance | : | Colourless to straw coloured liquid |
| Density | : | 1.10 ± 0.05 |
| pH (as is) | : | Less than 4 |

HANDLING, STORAGE AND PRECAUTIONS

VISICLEAN – AC is safe to handle but use of safety goggles and hand gloves are recommended. In case of contact with skin, wash with copious amount of water. In case of ingestion induce vomiting and get medical attention.

PACKING

30KGS. HDPE Carboys.

PRODUCT INFORMATION

VISICLEAN - ALK

(Cleaning chemical for Reverse Osmosis)

INTRODUCTION

VISICLEAN – ALK is specially formulated blend of cleaners for the effective removal of carbonate, metal oxide and sulfate scales of Barium, Strontium and Calcium in reverse osmosis system.

BENEFITS

1. For reverse osmosis system operating on feed water containing barium, strontium apart from commonly encountered hardness salts, there is always potential for scales formation of calcium, barium and strontium. Barium sulfate scales once formed are extremely difficult to remove. **VISICLEAN – ALK** effectively removes these barium sulfate scales and also sulfate scales of strontium and calcium.
2. Liquid cleaner which allows shorter mixing time.
3. Low foam formulation.
4. Cost effective program for carbonate / sulfate scales removal.
5. No adverse effects with repeated use of solution.

CLEANING PROCEDURE

1. Prepare the stock solution of **VISICLEAN – ALK** using DM water or permeate water only.
2. Use dilution ratio of 0.5 to 3.0% in proportion to the total volume of the cleaning system.
3. Flush the membranes using permeate water or DM water.
4. Circulate at the flow rate recommended by the membrane manufacture depending upon the membrane size. Pass already prepared cleaning solution through membranes, circulate the cleaning solution of 1 – 2 hours. if the solution become turbid. Prepare fresh solution and re-circulate through membrane.
5. Soak the membrane for 30 – 60 minutes.
6. In multi pass systems, best results can be achieved if each pass is cleaned individually.
7. Drain out the cleaning solution and flush the system with DM or permeate water.
8. Restart the plant.

SPECIFICATION

| | | |
|--------------------|---|-------------------------------------|
| Appearance | : | Colourless to straw coloured liquid |
| Density | : | 1.15 ± 0.05 |
| pH (as is) | : | More than 9 |
| pH (1% Solution) | : | More than 9 |

HANDLING, STORAGE AND PRECAUTIONS

VISICLEAN – ALK is safe to handle but use of safety goggles and hand gloves are recommended. In case of contact with skin, wash with copious amount of water. In case of ingestion induce vomiting and get medical attention.

PACKING

30KGS. HDPE Carboys.

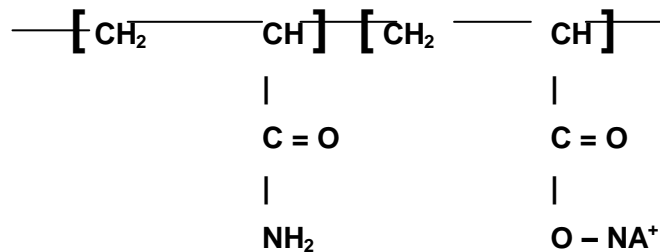
PRODUCT INFORMATION

VISISPERSE – 8174 (POLYELECTROLITE)

Product Description

VISISPERSE – 8174 (P) is a strong anionic and high molecular weight polyacrylamide type flocculants in granulated powder form. It is used in the service water and industrial water clarification. It has excellent effect as a promoting agent. It has wide variety of industrial application like clarification, thickening, dewatering, floatation etc. They work on bridging / bonding mechanism by their high chain length, they tie the colloidal particles fines and form rapidly settling / seperating flocks which are easy to seperate from suspension.

Chemical Structure



Physical Properties

| Test | Properties |
|---|------------------------|
| Ionic Type | Strong Anionic |
| Appearance | White Granules |
| Bulk Density | 0.5 – 0.8 |
| Molecular Weight | Approximate 20 million |
| pH of (0.2%) Solu. in distilled water | 6 – 8 |

Characteristics

1. VISISPERSE – 8174 (P) shows good clarification and good clarity because of its high charge density.
2. It's fines application in chemical, treatment of sewage, ceramic and fly ash settling and in textile.
3. Because VISISPERSE – 8174 (P) is granuled, it is easy to handle and its storage stability is excellent.

Method of Use

1. Optimum dosage of VISISPERSE – 8174 (P) differs depending on the kind of suspension, concentration and pH. Therefore it should be used after a priliminary lab, testing. In general 0.2 – 20 gm/l against suspension is appropriate.
2. While preparing stock solution of VISISPERSE – 8174 (P) a 0.05 – 0.1% is appropriate before using by 10 times improves treatment effects further.

Application

1. Process Treatment

a. Chemical

Sedimentation of titanium oxide.

Phosphate plant tailing water recovery

b. Mining

Filtration of slime and coal powder

Iron ore tailing water recovery

c. Oil

Enhanced oil recovery

d. Agriculture

Clarification /Filtration of syrup in sugar manufacture.

2. Waste Water Treatment

a. Steel Metal

Treatment of sewage from metal plating

b. Chemical

Treatment of sewage from leather processing

c. Civil Engineering

Treatment of sewage from construction

d. Textile

Treatment of sewage from wool washing

Treatment of sewage from dyeing

e. Mining

Treatment of sewage from mining process

Treatment of coal washing

f. Sugar Industry

Packing

25 Kgs capacity Bags..

PRODUCT INFORMATION

LOCARB – O (Fuel Oil Additive)

PRODUCT DESCRIPTION :

LOCARB - O is a multi functional blend for prevention of corrosion, scale & carboneous deposits caused by fuel oil in Boiler. The product instantly reduces the soot deposits to almost negligible level. It makes emission of the stack very clean & keeps the burners & furnaces free from soot.

SPECIFICATION :

| | | |
|------------------|---|---------------------|
| Appearance | : | Amber colour liquid |
| Odour | : | Faint |
| Specific Gravity | : | 0.85 ± 0.05 |

ADVANTAGES :

1. Total combustion of oil without leaving unburnt soot or carbon.
2. Blowing off & cleaning process are easily avoided, as combustion is total.
3. The oil mixed with LOCARB - O can be fired at a low fuel temperature.
4. Reduces manpower requirement for boiler cleaning.
5. Reduces down time.
6. Increases boiler availability.
7. Improves heat transfer efficiency.
8. Significant saving in fuel cost.

9. The boiler efficiency, even after an year of use, remain 90% while without addition of LOCARB - O, it falls to 60% from the initial 90%.
10. Without addition of LOCARB - O, flame is longer with high level of generation of particulate deposits. With LOCARB - O addition the flame is short & crisp with 50% to 70% reduction in particulate deposits.
11. Keeps the burner, furnace & stack clean & free of soot.
12. Reduces stack temperature.
13. Increases the heat output per kg of input of energy source.
14. Neutralize acid & prevents corrosion.
15. Disperses the sludge.

DOSAGE :

Actual dosage depends upon the extent of carboneous deposits & boilers operating condition. However, the recommended dose is 1 to 1.5 liter of LOCARB - O for 1000 liters of fuel oil to be added in the day tank before filling.

CAUTION :

LOCARB - O is highly inflammable & should not be exposed to heat & fire. It should not be kept open. Avoid contact with skin. In case of contact, wash with soap & fresh water. Do not swallow. Keep the container closed & away from direct heat.

PACKING :

50 litres HDPE Carbouys.

PRODUCT INFORMATION

LOCARB - C (Fuel Coal Conservation)

PRODUCT DESCRIPTION :

LOCARB – C is a multi functional free flowing powder blend that can prevent corrosion, deposits & keeps the stack clean. It will not allow the generation of uncombusted particulate. Hence, the air does not get polluted with particulate fly ash escaping of the chimney. It has ability to burn the total coal & its containing components.

SPECIFICATION :

| | |
|----------------|--------------------------|
| Appearance : | Gray free flowing powder |
| Odour | Odourless |
| Bulk density : | 1.09 ± 0.05 |
| pH of 1% soln. | 9.5 – 11.5 |

ADVANTAGES :

1. Reduces acid dew point & prevents corrosion.
2. Reduces smoke density & particulate loading.
3. It modifies the fire side deposits to a more desirable chemical composition.
4. Raises the melting point of fly ash deposits hence no adherent deposits on furnace wall & metal tubes.

5. High temperature & low temperate corrosion can be prevented efficiently.
6. Allows the maximum operation time, as the shut down is almost nil.
7. Total combustion of coal without leaving unburned soot or carbon.
8. Eliminates periodical blow off of soot.
9. Keeps the emission of stack very clear.
10. Decreases the temperature of stack.
11. Increases the heat output per kg of input of energy source.
12. Keeps the furnace clean & free of soot.
13. Increases thermal transfer.
14. Optimize production with less energy requirement.
15. Product is non-toxic & easy to handle.

DOSAGE :

It is not possible to recommend exact dosage due to many variations of condition under which boiler operates. Dosage depends on factors such as load, fuel quality, operating system, etc. However, the recommended dose is 1.5 kg of LOCARB - C for 10 MT of coal.

PACKING :

50 Kgs capacity Polyethylene Bags.

PRODUCT INFORMATION

CHLORINE ACTIVATOR

DESCRIPTION

CHLORINE ACTIVATOR appears in white powder, granular and tables forms with irritating odor and solubility of 1.2g in 100g water at 25^oC. The pH value of its 1% solution is 2.7 – 3.3. The surface density is 0.55g/ml for powder form, 0.95g/ml for 8 – 15 mesh granular and 1.1g/ml for 5 – 8 mesh granular.

USAGE

CHLORINE ACTIVATOR is an effective broad-spectrum organic chlorine disinfectant and bleacher that can kill various kinds of bacteria, algae, fungi and virus ; even a small dose can have long last effect. It's stable in chemical composition, conveniently stored and transported, safe and convenient to use. CHLORINE ACTIVATOR can reach very high purity and release final hydrolysate of water, ammonia, and carbon dioxide with no insoluble substance left after use. The U.S. FDA and EPA have approved CHLORINE ACTIVATOR as a disinfectant for food and drinking water and agreed that it meets the criterion of safety even though the available chlorine in the water is as high as 100mg/l.

CHLORINE ACTIVATOR finds numerous applications both in industrial and civil use. It is widely used in civil sanitation, pools and spas, preventing and curing diseases in husbandry and fishery, fruits and vegetable preservation, waste water treatment, algaecide for recycling water of industry and air conditioning, anti-shrink treatment for woolen, treating seeds, bleaching fabrics, and organic synthesis industry, etc.

SPECIFICATION

| Item | TYPE | SPECIFICATION | AVAILABLE CHLORINE |
|--------------------|----------|---------------------------|--------------------|
| CHLORINE ACTIVATOR | POWDER | | > 90% |
| | Granular | 5 – 8 mesh 8 – 15 mesh | > 90% |
| | Tablet | 200g/tablet | > 90% |

CAUTIONS IN TRANSPORTATION AND STORAGE

Do not expose CHLORINE ACTIVATOR products to moisture, light, inflammable substance, acid, alkali and chemical compounds containing ammonia.

1. Do not transport with foodstuff and feedstuff
2. Plastic and porcelain wares are recommended to use to hold or dissolve the product. Do not use metal containers in order to avoid corrosion.
3. The product is irritating to human skin, nose and eyes.
4. Do not mix the product with acid, alkali and easily oxidized organic substances when making other chemical compounds with CHLORINE ACTIVATOR
5. CHLORINE ACTIVATOR can promote burning though the product itself is not combustible. It also produces poisonous gas when it gets heated. In case fire breaks out, use carbon dioxide, anti-alcohol foam and large amount of water to extinguish it.

DIRECTIONS ON USING CHLORINE ACTIVATOR IN SWIMMING POOLS AND SPAS

CHLORINE ACTIVATOR is the solid chlorine disinfectant with the highest available chlorine. It's convenient to transport and store. It's safe and easy to use with very small dosages, with no insoluble substance left after use because of its high purity. Swimming pools disinfected with CHLORINE ACTIVATOR appears transparent and clear in light blue. CHLORINE ACTIVATOR hydrolyses in water and produces cyanuric acid that is a stabilizer of the remaining chlorine that slows down the consuming speed of free chlorine. Pools using CHLORINE ACTIVATOR reduce stimulation to human skin, eyes and hairs. It has been proven that CHLORINE ACTIVATOR is an ideal disinfectant for swimming pools.

USAGE

1. CHLORINE ACTIVATOR granular can be mixed by small amount of water and the powder should be added to water and made into paste before they are scattered into pools. The tablets can be directly cast into the pools evenly. The granular and tablets can also be continually added to the water through a special kind of feeding device.
2. It is recommended to use CHLORINE ACTIVATOR about half an hour before the pools are open. In summer. Apply once in the morning after the sediments at the bottom of the pool are cleaned ; apply again at eight hours apart to ensure a density of adequate free chlorine. In winter, apply just once after the bottom of the pool is cleaned in the morning.

DOSAGE

1. Indoor cycling swimming pool with filtration; 1.0 – 1.5g/ton water per day in winter: 1.5 – 2g/ton water per day in summer.
2. Outdoor cycling swimming pool with filtration: 1.5 – 2.5g/ton water per day.
3. Outdoor replenish swimming pool: 3.0 – 4.0g/ton water per day.
4. Family or exclusive use swimming pool: 0.8 – 1.2g/ton water per day.
5. The dosage should be increased to 3.0 – 4.0/ton.

CAUTIONS

1. Do not expose the product to moisture, light, acid, alkali and inflammable substance during storage and transportation.
2. It's recommended to use dry plastic vessels to hold the products. Do not use metal vessels and containers.
3. It must be used right after being mixed with water.
4. In case of being exposed to human skin and eyes, use large amount of water to wash the affected area.

DIRECTIONS ON USING CHLORINE ACTIVATOR IN SANITARY

CHLORINE ACTIVATOR can be used in household as well as restaurants, hospitals and other public places for disinfecting and sterilization, killing various kinds of bacteria, fungi, virus and preventing diseases from spreading.

USAGE AND DOSAGE

FACILITIES SUCH AS BATHROOM, BATHTUB, LAVATORY, BARREL, BASIN AND SLIPPERS IN PUBLIC

Clean the facilities first. Spray on the facilities CHLORINE ACTIVATOR solution with an available chlorine density of 300mg/l (0.3g CHLORINE ACTIVATOR in 1kg water), or bathe them in the solution for 10 – 20 minutes. Virus like Type B Hepatitis and Gonococcus can be killed.

KITCHENWARE AND TEA SETS

Clean the kitchenware and tea sets with water. Bathe them in CHLORINE ACTIVATOR solution with an available chlorine density of 200mg/l (0.2g CHLORINE ACTIVATOR in 1kg water) for 5 minutes and then dry them out.

GLASS AND PLASTIC BOTTLES AND THE MANUFACTURING SITES

Clean the objects with water. Bathe them in the solution with a density of 300mg/l for 10 – 20minutes. The germs in the containers can be killed. Use the same solution in the bottle washers can achieve the same effect. To disinfect the working sites, just spray the solution with a density of 600mg/l on the surface of the objects and into the air.

CLOTHES, BED SHEETS, TOWEL, QUILT COVERS AND MOPS IN HOUSEHOLDS OR PUBLIC PLACES

Add 0.3 – 0.6g CHLORINE ACTIVATOR to every kilogram of clothes together with the detergent so as to achieve the effect of disinfecting, sterilization and cleaning.

DISH WASHING MACHINE

Each operation with 0.3g CHLORINE ACTIVATOR in a dish washing machine helps to remove oil and extinguish Type B Hepatitis virus and infectious bacteria.

DISPOSAL OF WASTE WATER AND DROPPINGS

Applying CHLORINE ACTIVATOR at a rate of 5g in a cubic meter helps to disinfect and deodorize.

TREATMENT OF RECYCLING WATER OF INDUSTRIAL USE AND AIR CONDITIONING

CHLORINE ACTIVATOR kills bacteria and algae and strips mud in the cooling water. It works with water containing alkali and ammonia.

DIRECTIONS ON USING CHLORINE ACTIVATOR IN DRINKING WATER

CHLORINE ACTIVATOR is easy and safe to use and convenient to carry. It's thus suitable for sterilization of scattered, temporary water supply to field workers or people in distressed area.

USAGE AND DOSAGE

1. Apply CHLORINE ACTIVATOR at a rate of 3 – 5g in 1 ton water until the chemical dissolves. Wait for half an hour before drinking.
2. The dosage should be increase accordingly when the water is contaminated or too muddy.

DIRECTIONS ON USING CHLORINE ACTIVATOR IN PREVENTION AND CURING OF AQUATIC DISEASE

CHLORINE ACTIVATOR can be used to disinfecting the water, tools and utensils, forage and fingerling in aquatic product cultivation. It also prevents and cures aquatic diseases caused by bacteria and fungi.

USAGE AND DOSAGE

PREVENTION

At the seasons when the fish and shrimp's disease often take places (April – August), apply **CHLORINE ACTIVATOR** every 15days at the rate of 0.2 – 0.3mg/l (0.2 – 0.3g in 1cubic meter). When using **CHLORINE ACTIVATOR** powder, put the powder into plastic containers and add water to dissolve, then scatter evenly into fishponds. The dosage in a fishpond of approx. 660 square meters in area and 1 meter in depth is 150 – 200g.

CURING

When diseases occur, apply **CHLORINE ACTIVATOR** once a day at a rate of 0.3 – 0.4mg/l (0.3 – 0.4g in 1 cubic meter water), 2 days as a course of treatment. At the same time, mix 0.3g **CHLORINE ACTIVATOR** per kilogram fish with cooled starch paste and stick to the forage, feed the fish once a day, 3 days as a course of treatment. 1 – 3 courses are recommended according to how severe is the conditions of the diseases.

CLEANING FISHPOND

CLEANING FISHPOND WITH WATER

Apply **CHLORINE ACTIVATOR** at a rate of 5 – 8g/l (5 – 8g in 1cubic meter water). Dissolve the chemical in the water before scattering into the pond. Fish should be raised 10days after cleaning the pond.

CLEANING FISHPOND WITHOUT WATER

Empty the pond and leave it under blazing sun for 3days. Dissolve **CHLORINE ACTIVATOR** at a rate of 1.2 – 1.6kg/660 square meters and scatter the solution evenly into the pond. Fish can be raised 3days later.

DISINFECTING FISH RAISING TOOLS AND UTENSILS

Spray, soak or polish the tools, nets and aquatic farm by CHLORINE ACTIVATOR solution in a density of 150 – 200mg/l (1.5 – 2g in 10kg water) to achieve the effect.

FORAGE

Soak the forage in the solution of 1.5 – 2mg/l in density for 20 – 30 minutes.

FINGERLING

Soak in the solution of 3 – 5mg/l in density for 10 – 20 minutes.

CAUTIONS

1. Accurately calculate the water volume and avoid over dosage.
2. Evenly scatter the products and deep form partial high density.
3. Plastic containers instead of the metal ones are recommended to hold the products.
4. Always keep the products in shady, cool and dry places. Do not store together with fish forage.
5. Do not use damp containers to hold the products. Always avoid mixing the products with a very small amount of water.
6. The products should be used in time after being dissolved in the water.

OXYTREAT – L

(Catalysed, Oxygen Scavenger)

Product Description

It is a catalysed oxygen scavenger which is used for chemical deoxygenation of boiler feed water.

Benefits

1. Controls localised corrosion by spontaneously reacting with dissolved oxygen.
2. Prevent iron pick-up in boiler blowdown.
3. Minimise boiler maintenance and cleaning cost.

Principal Uses

OXYTREAT – L is specially developed for internal treatment of industrial boilers operating upto a pressure of 900 p.s.i. where softened water, DM water, condensate water are used for boiler feed. The catalysed oxygen scavenger present in OXYTREAT – L reacts with dissolved oxygen 20 to 50 time faster than the commercial uncatalysed oxygen scavengers & hence complete removal of oxygen can be achieved in a matter of seconds.

Recommended Dosage and Application

The amount of OXYTREAT – L required for any particular installation will depend upon factors such as, amount of dissolved oxygen in feed water, the amount of water evaporated and the type of boiler. Our experts will recommend the dosage which can be prepared in soft water or condensate will stirring. It is advisable to maintain boiler feed water temperature above 75⁰C before addition of OXYTREAT – L.

Dosage Calculation

$$\text{ppm dosage} = \frac{600}{\text{Concentration factor}}$$

However, dosage may vary depending upon oxygen concentration in the boiler. You adjust the dose by monitoring 30ppm of sulphite concentration in the boiler blowdown.

Typical Specification

| | | |
|---------------|---|--|
| Appearance | : | Colourless to pale yellow liquid |
| Density | : | 1.20 ± 0.05 gm/ml. |
| pH of 1% soln | : | Alkaline |
| Solubility | : | Soluble in water with all proportions. |

Blowdown

It is essential to blowdown the boiler every shift to ensure complete removal of sludge from the entire system. This will also prevent the total dissolved solids from exceeding the prescribed limits.

Handling

OXYTREAT – L is not a hazardous chemical although it may irritate sensitive skin, in such an incidence wash the affected are with cold water immediately. Use rubber gloves, goggles or face shields while handling OXYTREAT – L

Packing

50kgs. HDPE Carboys.

PHOSTREAT – 020

(Precipitant cum phosphate builder)

Product Description

PHOSTREAT – 020 is a synergistic blend of chelant and phosphate conditioner. It is specially designed for controlling scales of alkaline earth metals and provide phosphate conditioning in boiler.

Benefits

It posses multiple properties like sequestration threshold inhibition and corrosion inhibition. It protect the base metal by providing inhibitor film on metal surface.

Principal Uses

Provides phosphate conditioning to boiler. It sequester calcium base compound in the boiler and effectively removes through blowdown.

It prevents iron pick-up in the boiler.

Minimise boiler maintenance down time and cleaning costs.

Recommended Dosage and Application

A dose in ppm in boiler feed water provides excellent results. The optimum level will depend on specific plant operating conditions and type of water. PHOSTREAT – 020 may be conveniently dosed directly from the container or diluted with water to any convenient strength for dosing through existing equipments.

Dosage Calculations

$$\text{ppm dosage} = \frac{300}{\text{Concentration factor}}$$

However, dosage of PHOSTREAT – 20 to be adjusted after analyzing the phosphate level in the boiler blowdown. It is to maintain between 15 – 20ppm.

Specification

| | | |
|---------------|---|--|
| Appearance | : | Colourless to pale yellow liquid |
| Density | : | 1.20 ± 0.05 gm/ml. |
| pH of 1% soln | : | 6.8 ± 0.05 |
| Solubility | : | Soluble in water with all proportions. |

Handling

Care should be taken to avoid contact with skin & eyes. In case of contact, flush the affected areas with plenty of water. Goggles and rubber gloves should be used at all times, when working with concentrated material.

Packing

50kgs. HDPE Carbouys.

PRODUCT INFORMATION

VISIPERSE – SI *(Reverse Osmosis Silica Antiscalent)*

PRODUCT DESCRIPTION

VISIPERSE – SI is a multifunctional antiscalant for reverse osmosis systems, highly effective in preventing silica scale formation on membrane surfaces. Beside its excellent silica inhibition properties **VISIPERSE – SI** is effectively controlling calcium carbonate, strontium sulphate, barium sulphate, iron oxide and calcium fluoride scale formation.

PRINCIPLE USES

VISIPERSE – SI is designed to prevent silica, calcium carbonate, strontium sulphate, barium sulphate, iron oxide and calcium fluoride scale formation in RO membrane.

RECOMMENDED DOSAGE & APPLICATION

The recommended dose is between 2 to 5 ppm however it may vary with system condition. **VISIPERSE – SI** is miscible with water in all proportions. It may be applied as the neat product, or as a solution strength of 10% w/w is recommended. **VISIPERSE – SI** should be dosed continuously, and proportionately to the feed water flow, to maintain the recommended dosage level.

Contd.....Page 2

TYPICAL SPECIFICATION

| | | |
|-------------------|---|---|
| Appearance | : | Clear yellow to amber colour liquid |
| Specific Gravity | : | 1.20 ± 0.05 gm/ml |
| pH of 1% Solution | : | < 4 |
| Solution | : | Miscible with water in all proportions. |

HANDLING

VISIPERSE – SI must be handle with care. Contact with eyes, skin and clothing should be avoided. In case of contact wash the affected area with warm soapy water.

PACKING

20 Kgs / 50kgs. HDPE Carbouys.

BOILER PLUS - HP

(A single product treatment for High Pressure Boilers)

DESCRIPTION & USE :-

BOILER PLUS - HP is a balanced formulation of neutralizing, filming and organic oxygen scavenger with dispersing aliphatic fatty poly-amines designed to control corrosion in boiler drum, steam lines and condensate lines. The product neutralizes carbonic acid in steam vapour and condensate lines. It forms a protective film on metal, reducing corrosion rates.

The product reduces corrosion and formation of iron bearing deposit.

This helps in keeping heat transfer surfaces, steam traps etc. clean, improving boiler efficiency.

BOILER PLUS - HP reduces concentration of iron in return condensate water. This reduces fouling in the boiler due to precipitation of iron hydroxide.

SPECIFICATION :-

| | | |
|------------------|---|--|
| Appearance | : | Clear Colourless to pale yellow liquid. |
| pH (Concentrate) | : | Alkaline |
| Density | : | 1.00 ± 0.05 |
| Solubility | : | Soluble in water at ambient temperature. |
| Boiling range | : | 100°C to 175°C |
| Flash point | : | > 55°C (ASTM D - 93) |
| Toxicity level | : | LD ₅₀ 5gm/kg (in rat oral) |

DOSAGE :-

BOILER PLUS - HP dosage depends upon the feed water quality and operating parameters. In general 10 to 12ppm of the product is to be added based on make-up water initially. The product should be dosed into the feed water line on continuous basis. A separate solution should be prepared and it should not be mixed with other treatment chemicals.

Contd.....Page 2

BENEFITS :-

Corrosion inhibitor, iron dispersant, neutralizing compounds in BOILER PLUS - HP protects entire system against corrosion due to dissolved gases like oxygen and carbon dioxide. This prevents equipment failure due to condensate corrosion. It protects the complete system by dosing chemical at a single point.

HANDLING :-

BOILER PLUS - HP may cause irritation. Avoid contact with skin and eyes. Wash contact area with plenty of fresh water. Store the container closed, in a cool and dry place.

FIRST AID :-

- SKIN : Flush area with water for atleast 10 minutes. Remove contaminated clothing. Seek immediate medical attention.
- EYES : Irrigate thoroughly with clean water for atleast 10minutes. Cover affected eyes with sterile eye pad and seek immediate medical attention.
- INGESTION : Wash mouth thoroughly and drink plenty of water. DO NOT induce vomiting. Seek immediate medical attention.

Packing

50kgs.HDPE carboys

PRODUCT INFORMATION

VISICOR – 203

Product Description

Calcium Chloride and sodium Chloride base chemicals are widely in use as chilling brine by various industries. These type of salt base antifreeze are attacking the base metal and increase corrosion rate. VISICOR – 203 is a specially designed liquid formulation for multimetal, which effectively control corrosion and metal pickup. Corrosion inhibition with 6400-6600 ppm of VISICOR - 203 IN CaCl₂ and NaCl brines is more than 99%.

Typical Specification

| | | |
|------------------|---|--|
| Appearance | : | Orange Yellow Liquid. |
| Specific Gravity | : | 1.4 ± 0.05 gm/cc. |
| Solubility | : | Miscible in CaCl ₂ and NaCl brine in all proportions. |

Recommended Dosage and Application

VISICOR – 203 provide excellent corrosion inhibition at 6400-6600 ppm in CaCl₂ and NaCl brine i.e. 6.4kg /1M CaCl₂ or NaCl brine. It is necessary and advisable to maintain pH of brine at 8.0 when VISICOR – 203 is added in the system.

Handling

VISICOR – 203 must be handle with care. Contact with eyes, skin and clothing should be avoided. In case of contact wash the affected area with plenty of water. Goggles and rubber gloves should be used at all times when working with concentrated material.

Packing

50kgs. HDPE Carbouys Capacity.

PRODUCT INFORMATION

ORGANIL

(Multi purpose bacteria and Organic control agent)

Organil is a complex formulation of processed silver, a noble metal and highly potent non toxic germicide. Silver is well known for its oligo-dynamic action (Cold sterilisation). It's stability enables organil to be stored for atleast 1 year at normal ambient temperature.

The Germ killing effect of organil is rapid and thorough, even from low to high temperatures. Organil generates neither smell nor taste, has no toxic effect, does not effect the pH value and causes no corrosion. Organil when added to water during processing causes no irritation to the eyes, skin or mucous membrane. Organil is perhaps the only biocide, which can be safely used in drinking water. The silver level is well below 180 micrograms/person/day permitted by W.H.O. Therefore it is safe for both human as well as animal life.

PROPERTIES

- Good stability in storage.
- Remains effective even at high temperatures.
- Non staining.
- Non - inflammable.
- Odour free.
- Totally Chlorine free.
- Long Lasting effect.
- Rapid sterilization.
- Non - carcinogenic and Non - Mutagenic.
- Non pollutant and bio - degradable.
- No irritation to skin or eyes.
- No alteration to taste of food/substance.
- LD 50 value is greater than 2800Mg/Kg of animal weight.
- No toxic effect reported.
- No resistance developed.

RECOMMENDED DOSAGE

Preferred Dosage is 25 - 50 ppm for potable water application. For control of Organics 100 - 150 ppm dosage is suitable.

SPECIFICATION

| | | |
|------------------|---|--------------------------|
| APPEARANCE | : | Clear Colourless liquid. |
| SPECIFIC GRAVITY | : | 1.10 ± 0.05 gm/cc |
| SOLUBILITY | : | Soluble freely in water. |

HANDLING

ORGANIL is non-inflammable. However, spontaneous combustion may occur if it is placed in contact with cotton wool, straw, paper, oil, coal, textiles etc. should be avoided. Handle with care and safety goggles, safety shoes and hand gloves to be used during handling of concentrated solution of organil.

PACKING

50KGS. HDPE CARBOUYS.

PRODUCT INFORMATION

PH BOOSTER

PRODUCT DESCRIPTION: PH BOOSTER PRODUCT IS AN ALKALINE WATER TREATMENT CHEMICAL SPECIALLY FORMULATED FOR RAISING THE PH OF BOILER WATER.

BENEFITS

The optimum blends of chemicals in **PH BOOSTER** provides the following important benefits.

5. Increase ph of feed water and act as alkaline buffer to maintain the ph.
6. Controls foaming
7. Conditions sludge to a free flowing state
8. Minimize Boiler maintenance, down time and cleaning costs.

RECOMMENDED DOSAGE & FEEDING

Ph booster can be used in medium, low and high pressure boiler to control acidic corrosion and also helps in sludge conditioning

The dosage is determined on the basis of nature of water in the system by technical experts from the company

TYPICAL SPECIFICATION

| | | |
|------------|---|--|
| Appearance | : | Colourless to light yellow viscous liquid. |
| pH | : | alkline |
| Solubility | : | Soluble in water with all proportions. |

BLOW DOWN

It is essential to blow down the boiler every shift to ensure complete removal of sludge from the entire system. This will also prevent the total dissolved solids from exceeding the prescribed limits.

RECOMMENDATIONS

- Boiler feed temp, to be maintained above 75°C
- Boiler feed hardness should be less than 5 ppm.

HANDLING

Ph booster is not a hazardous chemical although it may irritate sensitive skin in such an incidence wash the affected area with cold water immediately. Use rubber gloves, goggles or face shields while handling

PACKING : 50kgs. HDPE Carbouys.