

# CARETREAT 5 SEAWATER

## **Disperses marine growth and reduces corrosion in sea water cooling systems, tanks and sea water systems**

- \* Prevents and controls marine growth in once-through sea water cooling systems.
- \* Protects system from corrosion by filming properties.
- \* Being biodegradable and not oil-based, its use does not contravene regulations limiting oil in discharge water.
  - \* The formula is approved by the U.K. Department of the Environment for use at a dose rate not exceeding 8 ppm for sea water pipelines feeding evaporators producing water for potable purpose
  - \* Has clearance of major international environmental control departments for discharge into harbour and sea.
  - \* Empty tanks remain protected for several days.

## **Introduction**

Caretreat 5 Seawater has been designed to effectively stop the development of micro organisms, shell embryo, bacteria and plant life commonly found in sea water. Most fouling of ships systems is primarily the result of microscopic organisms colonising in the pipework, attracting growth of larger lifeforms and giving anchorage to sand and silt. Partial blockage of heat exchanger tubes reduces flow, resulting in local overheating and subsequent scaling from hardness salts.

## **Directions for use**

### **1. Sea water cooling systems**

The product is injected into seachests to give a concentration of 6 ppm over a period of 1 hour every two days that the vessel is in shallow water. This period is sufficient to remove the foulants before they have anchored and started adult development, at which time they are extremely difficult to control. To achieve these dosing rates, 0,6 litre of Caretreat 5 Seawater must be injected each second day for each 100 tons/h of flow into the seachest(s) (=0.006 litre/ton). Vessels which are continuously coastal must inject Caretreat 5 Seawater at the same rates every third day.

## **Dosage instructions**

Example : system of 250 tons/h.

### **Dosage method**

Using the Caretreat 5 Seawater Dosing System to high and low boxes via stop valve and non-return valve. Extension tube mounted inside box, out to grid. For further details refer to the Marine Care equipment information sheet.

### **Dosage routine**

- A. Calculate amount of Caretreat 5 Seawater for each dose. i.e. 250 tons per hour x 0.006 litre = 1.5 litres/dose.
- B. If using a dosing system which requires dilution of Caretreat 5 Seawater with water never add water to the product. Always mix the product into the water, stirring continuously.
- C. On approaching shelf or coastal area, open discharge valves to operating chest and operate system for 1 hour.
- D. Close system valves.
- E. Make note of date and which box dosed.
- F. If changing to high level suction remember to dose to the correct box.
- G. When leaving area (dockside, estuary, coast or shelf area) continue dosing on 2 day cycle so that last dose is after clearing shallow waters.

### **2. Tanks**

Inject Caretreat 5 Seawater into sea water at 45 - 130 ml per m<sup>3</sup> water capacity.

### **3. Pipelines**

Dose at 100 ppm by injecting 80 x D-ltrs per kilometer of pipeline. (D = pipe diameter, in meters). If fresh water is used for either applicaion lower concentrations may be used.

### **Properties**

Cloudy yellowish-brown aqueous liquid containing dispersants with filming properties. In concentrations less than 10 % miscible with water.

Specific gravity (20°C)	: 0.99
Flash point PM CC	: above 100°C
pH (1 % solution)	: approx. 7

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

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