

**CLOG-CONTROL™****DESCRIPTION**

CLOG-CONTROL is a highly effective, amine-based biocide, used for treating and inhibiting the growth of living organisms both micro and macro which cause the problems of biological fouling, within sea cooling water systems.

Biological fouling is the formation of a bio-film on the internal surfaces of the cooling system that are in contact with water. This bio-film consists of a layer of micro-organisms such as bacteria, fungi, yeast and algae. In case that there is no control of the biological fouling, the bio-film that results from such growth can plug the pump equipment, block pipelines and coat heat transfer surfaces with layers of slime. Biological fouling of the cooling system leads to improper operation and the reduction in the efficiency of the affected equipment.

CLOG-CONTROL consists of specific amine biocides, which prevent and inhibit the living micro organisms such as, bacteria, fungi and macro organisms such as barnacles, mussels and clams. At the same time it protects the seawater systems from corrosion.

CLOG-CONTROL can be used in a wide range of applications on board and is suitable for use in all seawater cooling lines, seawater intakes, trimming tanks, ballast tanks etc.

ADVANTAGES AND CHARACTERISTICS

- ◆ Effectively prevents the formation of marine bio-film in seawater systems and inhibits the growth of living micro and macro-organisms.
- ◆ Protects the system from seawater corrosion, leaving an amine protective film on the metal surfaces.
- ◆ Removes the bio-film, caused by micro-organisms, on heat exchangers, which acts as insulating barrier therefore increasing the thermal conductivity.
- ◆ Does not consist of strong oxidant materials such as Chlorine and Bromine biocides.
- ◆ Maintains heat transfer in the system.
- ◆ Non toxic, non-corrosive and fully biodegradable.
- ◆ No known effect on rubber or plastic compounds.
- ◆ Cost effective, easy to apply and use.

PHYSICAL PROPERTIES

CLOG-CONTROL consists of specific amine biocides and is a non toxic, non-corrosive and fully biodegradable product.

Appearance/Color	: Clear Liquid/Colorless
Odor	: Slight amine like
Specific Gravity	: 0.99–1.01 gr/cm ³ at 20°C
Solubility	: Complete soluble in water
pH value	: 10.00–12.00

PACKAGING

Order Number	: 673014 (30 ltrs)
Container	: Plastic jerrican

APPLICATION AND USE**A. Dosing Procedure**

The quantity of **CLOG-CONTROL** to be used is proportional to the rate of seawater flow, the desired treatment levels and the degree of contamination of the system to be treated. The recommended dosage for a sea water cooling system is 0.4 litres of **CLOG-CONTROL** per 100 tons of seawater flow for a period of one hour. This procedure must be repeated every 48 hours.

The product should be dosed using the **MARICHEM ELECTRONIC DOSING SYSTEM** or **MARICHEM MANUAL DOSING SYSTEM**. The dosage must be applied in a cross flow between the seawater suction pump and the system heat exchange. However, the dosage can be adjusted to suit the rate of the seawater flow. The proposed dosage should effectively remove the marine bio-film and completely treat the marine biological growth.

B. Feeding Procedure

CLOG-CONTROL can also be applied in the fresh water cooling systems when bio-fouling problems are encountered. It can act in combination with **D.C.W.T. NON CHROMATE** or **D.C.W.T. POWDER**.

In the fresh water cooling system the suggested dosage for application is 0.8lt per 10tons of circulating water. This quantity could effectively treat the biological fouling during water circulation. The dosage could be applied in the feed water tank or in a cross flow between the suction pump and the fresh water cooling system.

**MARICHEM®**

► **CLOG-CONTROL** should not be applied for potable water applications.

► **IMPORTANT NOTICE**

CLOG-CONTROL should not be fed to a system while the sea water is being drawn as makeup for an evaporator or water maker. Either isolate the evaporator or shut it down while **CLOG-CONTROL** is being dosed and for at least 30 minutes afterward.

! SAFETY AND HANDLING

HANDLING	Handle with care. Store in a dry, cool and well ventilated environment.
SAFETY	IMMEDIATE ACTIONS
Eye Contact	Avoid Eye contact. Otherwise, flush with plenty of water for a few minutes. Seek medical attention.
Skin Contact	Avoid Skin contact. Otherwise, wash contaminated area thoroughly with water. Seek medical attention.
Inhalation	Avoid inhalation of vapors. Otherwise, seek fresh air source at once. Seek medical attention.
If Swallowed	Avoid ingestion. Otherwise, consume a considerable quantity of water. Do not induce vomiting. Seek medical attention.
GENERAL INSTRUCTIONS	Avoid spillage, splashing and mishandling. Precautionary measures for body protection are strongly recommended before use.

 **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.

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