FERROFILM®

DESCRIPTION

FERROFILM® corrosion and erosion inhibitor is a compound containing polyelectrolytes combined with ferrous sulfate. It achieves long-lasting protection against erosion and corrosion in marine seawater cooled heat exchangers. FERROFILM® corrosion and erosion inhibitor forms a protective film of hydrous ferric oxide on the surfaces of the non-ferrous tubes and water boxes. The special formula provides for a very tight molecular bonding action of the film to the surfaces. This film is thinner, harder, denser, more uniform, and more tightly adherent than a comparable film formed by dosing only ferrous sulfate.

As well as combatting erosion/corrosion, FERROFILM® corrosion inhibitor acts as a cathodic polarizer, thereby passivating the surfaces against galvanic corrosion. FERROFILM® corrosion inhibitor also provides anodic inhibition, acting as a sacrificial material between applications.

APPLICATION & USE

FERROFILM® corrosion inhibitor should be fed as a 10% mixture by weight with seawater or fresh water. The mixture should be fed into the condenser or heat exchanger inlet line. A suitable gauge line, drain, or vent connection can be adapted as a feeding point. The product mixture may be fed by gravity with a suitable tank and flowmeter or it may be fed by means of a pump and tank set. The tank contents should be continuously stirred during the dosing period. Dosage fittings and lines should be of steel or plastic; the use of copper alloy tubing and connections should be avoided.

DOSAGE

FERROFILM® corrosion inhibitor should be dosed over a one-hour period. Dosage should normally be done every day. The dosage rate may be based on the cooling surface area or on the seawater flowrate. The tables to the right show typical dosage schedules.

When operating in waters with high silt concentration or high biological growth, the recommended dosage should be increased 50%. Initial dosage should be twice the dosage listed. Regular dosage can be maintained after 60 days of initial dosage.

COOLING SURFACE		
AREA m^2	FERROFILM® kg	10% SOLUTION L/Minute
500	2.0	0.33
1000	4.0	0.67
2000	7.5	1.25
3000	11.0	1.80
4000	15.0	2.50
5000	4.0	0.08
10000	7.5	0.15
20000	15.0	0.30
30000	23.0	0.46
40000	31.0	0.62

SEAWATER FLOW				
FERROFILM® 10 % SOLUTION				
Tons/Hour	kg	lbs.	liters/ minute	gallons/minute
1000	1.4	3.0	0.23	0.06
2000	2.8	6.0	0.47	0.12
3000	4.2	9.0	0.70	0.19
5000	7.0	15.0	1.20	0.32
10000	14.0	31.0	2.30	0.60

TYPICAL PROPERTIES

Appearance:	Green-brown, free-flowing powder
Density:	1200 kg/m^3 (75 lbs./ft^3)
Solubility:	Requires agitation
pH (1% Solution):	2.9 - 5.1
Flash Point (PMCC):	None

NOTE: Always wear the appropriate personal protective equipment when using this product.

PACKAGING

FERROFILM® corrosion and erosion inhibitor is available in 25-kg containers (PCN 9517626).

Contact your Drew Marine representative for more information

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IMPORTANT INFORMATION

Drew Marine maintains Safety Data Sheets on all of its products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees.

Our Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Drew Marine products.

Drew Marine®

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