

Oceanic EPF (US)

Hydraulic Equipment Preservation Fluid

General Description

Oceanic EPF is a synthetic water based fluid formulated to give total protection to the internals of hydraulic systems during long-term storage. It contains additives to combat corrosion, microbiological degradation, and freezing, and is compatible with the MacDermid range of control fluids and other water based products.

Salient Features

Corrosion Inhibition Oceanic EPF is fully inhibited to prevent corrosion of both ferrous and yellow metal alloys in contact with the fluid. In addition, a vapor phase corrosion inhibitor is incorporated to prevent attack on metals above the fluid surface. This is particularly useful where it is impossible to achieve a complete system fill, or where some fluid leakage could occur during the storage period.

Suitable for All Climates The low freezing point of Oceanic EPF makes it ideal for storage in all climates. Equipment in temperate locations can be diverted for use in cold areas (-50°C (-58°F), without any need for a change of preservation fluid.



Compatibility with Control Fluids The compatibility of Oceanic EPF with MacDermid's Oceanic HW Subsea Production Control Fluids and Erifon HD856 BOP Control Fluid Concentrate and Erifon HD603 Control Fluid means that these fluids can be installed in equipment without the need for a flushing operation. If equipment is to be filled with Erifon 818 compensator fluid the Oceanic EPF will have to be drained due to the difference in viscosity.

Resistance to Microbiological Attack The anti-microbiological package contained in Oceanic EPF prevents degradation of the equipment by the action of microorganisms such as bacteria and fungi. These, if allowed to grow unchecked in an unattended system, can cause acid corrosion and sludging, requiring expensive reconditioning work before the equipment can be put into service.



Physical Properties

Appearance	Clear colorless liquid
Viscosity (cS) @ -20°C = -4°F	40
0°C = 32°F	15.6
40°C = 104°F	3.5
Freezing Point	-50°C (-58°F)
Specific Gravity @ 15.6°C (60°F)	1.086
Boiling Point	120°C (248°F)
pH	9.89

Using Oceanic EPF

For best results, especially where there is evidence of microbiological activity in the equipment, flushing with Erifon Systems Cleaner should precede installation of Oceanic EPF. MacDermid staff can offer detailed advice on the specific procedures best suited to individual applications.

Individual components such as hydraulic cylinders or accumulator shells may be stored by laying on their side and filling to between two thirds and three quarters of their capacity with Oceanic EPF.

For complete systems, Oceanic EPF should be installed immediately after system manufacture, using the system HPU (Hydraulic Power Unit) and control system to ensure that all areas are filled. Because EPF has good lubricating properties the fluid can be used for flushing, function testing and commissioning of equipment.

Oceanic EPF has extremely low toxicity and can be discharged into the sea. Testing following the PARCOM guidelines shows Oceanic EPF to be far less toxic than most control fluids or other preservation fluids. This means that equipment filled with EPF can be installed subsea and commissioned subsea without the need to flush with control fluid.

Care must be taken with all systems in storage to ensure that contaminants cannot enter the system, and therefore all ports should be securely sealed. For protection of external system surfaces, MacDermid produces the Vinbrite range of corrosion preventive.

MacDermid would recommend a sample of EPF should be sent to our laboratory every three months to ensure no contamination or degradation has occurred.

Information given in this publication is based upon technical data gained in our own and other Laboratories and is believed to be true. However the material is used in conditions beyond our control thus we can assume no liability for results obtained or damages incurred through the application of the data presented herein.



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