

Key Benefits

- **Non-sheen, seawater-soluble alternative to oil-based fluids**
- **Meets stringent global environmental acceptability requirements**
- **Excellent liquid and vapor phase corrosion protection**
- **High performance lubrication properties**
- **High resistance to microbial contamination**
- **Stable with up to 50% seawater contamination**
- **Manufactured to NAS 1638/AS 4059 Class 6/6b-f or better cleanliness**
- **Free Fluid Monitoring programme ensures long service life**

Description

Water-based hydraulic control fluids specifically formulated for surface and closed loop/return line Blow Out Preventer (BOP) systems, typically present on Jack-Up and Platform rigs. Erifon CLS (Closed Loop System) fluids are environmentally acceptable alternatives to traditional oil-based fluids.

Erifon CLS fluids are compatible with each other and offer the same excellent technical performance. Fluids differ only in glycol content, which ensures optimal performance in all geographical regions.

Approvals

Erifon CLS fluids are industry standard fluids and meet all original equipment manufacturer (OEM) requirements.



Typical Physical Properties

| | Erifon CLS 25 | Erifon CLS 40 | Erifon CLS 60 |
|-------------------------------|-----------------------------------|------------------------------------|------------------------------------|
| Climate | Tropical | Mild | Cold |
| Operational Temperature Range | -10°C to 135°C (14°F to 275°F) | -25°C to 135°C (-13°F to 275°F) | -50°C to 135°C (-58°F to 275°F) |
| Appearance | Clear, Pale Straw | Clear, Pale Straw | Clear, Pale Straw |
| Specific Gravity @15.6°C | 1.05 | 1.07 | 1.09 |
| pH | 9.8 | 9.7 | 9.5 |
| Pour Point | -10°C (14°F) | -25°C (-13°F) | -50°C (-58°F) |
| Kinematic Viscosity (cSt) | | | |
| -40°C (-40°F) | Solid | Solid | 464 |
| -20°C (4°F) | Semi Solid | 25 | 66 |
| 0°C (32°F) | 6.0 | 9.2 | 18 |
| 20°C (68°F) | 2.8 | 4.4 | 7.8 |
| 40°C (104°F) | 1.6 | 2.5 | 6.0 |

For further recommendations, technical information, Health & Safety data sheets, OEM or environmental approvals, email wigansales@macdermid.com

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ERIFON CLS SERIES

Environmental Information

MacDermid maintains worldwide environmental approvals and can offer Erifon control fluids suitable for use in every Exploration and Production region around the world. The current environmental status of Erifon CLS in your area can be obtained from our environmental specialists.

Storage

Erifon CLS should be stored in dry conditions, ideally out of direct sunlight. Normal storage temperature range is 5 to 40°C.

Material Compatibility

Erifon CLS contains performance additives which ensure high levels of compatibility with materials typically used closed loop BOP control systems. Extensive material compatibility tests have been performed with Erifon CLS.

| | |
|--|--|
| Ferrous metals (cast iron, carbon steel, low & high alloy steels, stainless steels...) | Compatible |
| Non-ferrous metals (copper, brass, bronze and other metals and alloys*) | Compatible with alloys typically used in subsea production control equipment. Avoid Zn, Cd, Pb and Mg metals. Aluminum should be hard anodized. |
| Coatings and ceramic materials | Avoid porous coatings. Compatible with most ceramic parts. Check ceramic coatings |
| Packaging & sealing materials (elastomers and thermoplastics*) | Compatible with standard NBR, HNBR, FFKM, VMQ/FMQ, CR, TFE/PTFE, PEEK. Some FKM & AU/EU/PU may show poor compatibility |
| Umbilical hose liner thermoplastics | Compatible with Nylon 11, PE and Polyether ester copolymers |
| Absorbent gasket materials | Avoid cork, leather, cotton impregnated materials |
| Paints | Avoid painting internal surfaces Cured epoxy, phenolic and nylon based paints are satisfactory. Avoid less resistant paints as they soften. Wash spillages immediately with water |
| Filter elements | Polypropylene and glass fiber filter elements recommended over paper filters |

* As material compatibility varies from compound to compound and supplier to supplier, consult supplier for recommendations or request specific compatibility tests.

MacDermid Offshore Solutions A Subsidiary of MacDermid Group

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