MacDermid Offshore Solutions
A Platform Specialty Products company

Oceanic HW 443 Series

HW 443, HW 443 ND, HW 443 R

Subsea Production Control Fluids

Key Benefits

- **ISO13628-6 specified, approved for use by all major equipment manufacturers**
- **Maximum operation temperature 145°C / 293°F**
- **Excellent corrosion protection (liquid & vapor phase) and lubrication properties**
- **Resistant to microbial infection**
- **Recommended for long-term equipment storage**
- **Outstanding stability with high levels of seawater ingress**
- **Fully compatible with Oceanic HW 500 Series, HW 500 P Series, HW 500 E Series, HW 700 Series & XT 900**
- **Meets stringent global environmental acceptability regulations**
- **Manufactured to NAS 1638/AS 4059 class 6/6b-f or better cleanliness. Filtration is required to maintain fluid cleanliness.**
- **Free Fluid Monitoring programme ensures long service life**

Description

High-performance, high-temperature water-based hydraulic fluids with an operational temperature range from -25°C to 145°C (-13°F to 293°F). Oceanic HW 443 fluids are used in open and closed loop Subsea Production control systems.

Oceanic HW 443 fluids are compatible with each other and offer the same excellent technical performance. Products differ only in colour (HW 443 fluorescent yellow, HW 443 ND no dye clear amber and HW 443 R fluorescent red).

Approvals

Oceanic HW 443 is named in ISO13628-6 specification and meets equipment manufacturer requirements.

Typical Physical Properties

	Oceanic HW 443	Oceanic HW 443 ND	Oceanic HW 443 R
Appearance	Fluorescent Yellow Fluid	Clear Amber Fluid	Clear Fluorescent Red Fluid
pH	9.7	9.7	9.7
Specific Gravity @15.6°C	1.07	1.07	1.07
Kinematic Viscosity (cSt)			
-20°C (-4°F)	25	25	25
0°C (32°F)	9.2	9.2	9.2
40°C (104°F)	2.5	2.5	2.5
Pour Point	<-25°C (-13°F)	<-25°C (-13°F)	<-25°C (-13°F)
Mobile at	<-35°C (-31°F)	<-35°C (-31°F)	<-35°C (-31°F)

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

THE **CONTROL FLUID TECHNOLOGY** LEADER

OCEANIC HW 443 SERIES

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Environmental Information

MacDermid maintains worldwide environmental approvals and can offer Oceanic Subsea Production control fluids suitable for use in every exploration and production region around the world. The current environmental status of Oceanic HW 443 fluids in your area can be obtained from our environmental specialists.

Storage

Oceanic HW 443 fluids should be stored in dry conditions, ideally out of direct sunlight. Normal storage temperature range is 5 to 40°C.

Material Compatibility

Oceanic HW 443 fluids contain performance additives which ensure high levels of compatibility with materials typically used in subsea production control equipment. Extensive material compatibility tests have been performed with Oceanic HW 443 fluids.

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/FMVQ, CR, TFE/PTFE, PEEK. Some FKM & AU/EU/PU have proven to be incompatible
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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