



PRODUCT DATASHEET

REVISION

Rev 03 / 2026

HDEO (EP) is the industry-standard high-density actuator fluid for both open and closed subsea actuator systems.

Specified globally for subsea actuator duty, it is engineered for reliable operation under the pressure and density requirements of modern subsea valve actuators.

Suitable for both open-circuit (discharge to sea) and closed-loop actuator configurations.

Extensively tested for compatibility with the metals, elastomers, and the subsea control and operational fluids found in subsea systems. Full compatibility data available in the Summary Manual.

DENSITY

**1.065 g/cm<sup>3</sup>**

Typical, at 20 °C.

ENVIRONMENTAL RATING

**OCNS D · Y1**

UK (OCNS Class D, no substitutables)  
Norway (Yellow Y1).

SYSTEM TYPE

**Open & closed-loop**

Subsea actuator duty.

Physical properties

TYPICAL VALUES

GENERAL

Appearance	Pale Yellow / Yellow
Specific gravity	1.065
Flash point	> 200 °C
Water solubility	Insoluble
Oil solubility	Insoluble

THERMAL RANGE

Pour point	-30 °C
Min. operating temp	-10 °C
Upper temperature	200 °C

VISCOSITY (cSt)

At 0 °C	2805
At 20 °C	630
At 40 °C	182

EXTREME PRESSURE

Mean wear scar	0.623 mm
Weld load	> 120 kg

FLUID PROPERTIES

Bulk modulus	1.09 GPa
Thermal expansion	0.00077 / °C

Need a sample, or technical data beyond this sheet? [Speak to our team.](#)

TECH@OFFSHORE-OILS.COM