

TECHNICAL PRODUCT SHEET

CYBIO—HFE

ISO 46, 68



DESCRIPTION

CYBIO-HFE oils is a series of high performance oils for hydraulic and power transmission systems, formulated to deliver excellent anti-wear protection in environmentally sensitive applications that fulfill EU Ecolabel's requirements. Formulated with specially selected esters and a superior performance additive system, CYBIO-HFE Series provides for high wear protection (FZG stage 12) outstanding thermal and ageing stability, high shear stability and good viscosity-temperature behavior for low-temperature applications.

APPLICATIONS

CYBIO-HFE Series oils surpass the performance requirements of major industry specifications and standards for hydraulic and power transmission systems, especially in both shore and off-shore areas with very strict environmental protection requirements. Being rapidly biodegradable, they surpass the minimum requirements of ISO 15380 HEES, European Ecolabel's biodegradability, ecotoxicity and carbon content criteria requirements.

SPECIFICATIONS

ISO	15380 (HEES))	
US EPA	VGP (2013)	Sperry Marine
EU	Ecolabel criteria	Rolls Royce Marine
Swedish Standard	155434	

PROPERTIES

CYBIO-HFE is a rapidly biodegradable hydraulic fluid that exceeds the requirements of ISO 15380, making it suitable for environmentally sensitive applications. It operates reliably over a wide temperature range and provides effective extreme pressure (EP) and anti-wear (AW) protection. Enhanced thermal and oxidation stability ensures consistent performance, system protection, and extended service life under demanding operating conditions.

BENEFITS

CYBIO-HFE offers a lower environmental risk and meets stringent European Ecolabel environmental requirements, making it suitable for environmentally sensitive applications. It demonstrates high biodegradability (>60% in the 28-day OECD 301B test) and provides reliable equipment protection across low and high temperature extremes. Superior anti-wear performance under boundary lubrication conditions, combined with excellent resistance to oxidative degradation, helps extend service life and maintain consistent system performance.



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PHYSICAL-CHEMICAL CHARACTERISTICS

CYBIO-HFE	METHOD	ISO 46	ISO 68
Density at 15°C, g/cm ³	ASTM D4052	0.882	0.886
Viscosity, Kinematic (cSt) 40°C	ASTM D445	46	68
Viscosity, Kinematic (cSt) 100°C	ASTM D445	8.85	11.95
Viscosity index	ASTM D2270	175	173
Flash point, COC, °C	ASTM D92	>185	>195
Pour point, °C	ASTM D97	-48	-48
FZG gear scuffing test A/8.3/90	DIN 51354	12+	12+

The above mentioned characteristics represent mean values.

STORAGE

All packages must be stored in covered, well-ventilated areas. If outdoor storage cannot be avoided, barrels must be placed horizontally to prevent water ingress and to protect labels and markings from damage. Products must not be stored at temperatures above 60 °C and must not be exposed to direct sunlight, freezing conditions, or extreme temperature fluctuations.



HEALTH & SAFETY

This product is not considered to pose significant risks to health or safety when used as intended and in accordance with recommended personal hygiene practices. It must not be applied for purposes other than those for which it has been formulated. For detailed guidance on safe handling and use, refer to the Safety Data Sheet (SDS).



USED OILS

Used lubricants must be collected at designated collection points to prevent environmental contamination. They must not be mixed with solvents, brake fluids, or antifreeze.

