cyclon® ENGINEERED TO PERFORM

TECHNICAL PRODUCT SHEET

HTO THERMO

ISO 22, 32

DESCRIPTION

HTO THERMO is a premium quality, low viscosity lubricant intended for use in closed indirect heating systems. It is formulated from highly refined mineral base stocks and special anti-oxidation additives. Due to its high specific heat and heat conductivity coefficients, high heat transfer rates are possible. HTO THERMO has low volatility tendency and a high viscosity index that enable long service life without deposits formation or viscosity increases.

APPLICATIONS

HTO is intended for use in indirect closed heating or cooling systems of any kind for industrial application (e.g. process industry, chemical plants, textile production units, etc.) where the bulk oil temperature can range between -10°C and 320°C. it can be also used for steel quenching processes. It is recommended that the lubricant's condition is monitored every 8 months.

SPECIFICATIONS

ISO	6743-12

PROPERTIES

HTO THERMO provides exceptional resistance to thermal cracking and chemical oxidation, ensuring durability under extreme operating conditions. Its high specific heat and thermal conductivity deliver superior heat transfer performance, while the low viscosity allows efficient circulation. HTO THERMO also offers reliable protection against rust and oxidation, combined with excellent demulsibility and enhanced filterability, making it ideal for systems requiring effective separation and cleanliness.

BENEFITS

HTO THERMO ensures improved system cleanliness and maintain operational efficiency over extended periods. It enables high heat transfer rates and allow easy starting in cold conditions, ensuring reliable performance in varying environments. The system remains in excellent condition even after prolonged operation, reducing repair and maintenance costs. Combined with its long service life, these properties make HTO THERMO a cost-effective and dependable solution for demanding thermal applications.

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PHYSICAL-CHEMICAL CHARACTERISTICS

HTO THERMO	METHOD	ISO 22	ISO 32
Density at 15°C, g/cm^3	ASTM D4052	0.863	0.872
Viscosity, Kinematic (cSt) 40°C	ASTM D445	23.3	31.2
Viscosity, Kinematic (cSt) 100°C	ASTM D445	4.48	5.32
Viscosity index	ASTM D2270	103	102
Flash point, COC, °C	ASTM D92	208	212
TAN, mgKOH/g	ASTM D974	0.03	0.03
Self-ignition point, °C	DIN 51794	352	356
Maximum use Temperature, °C	-	320	320
Maximum film Temperature, °C	-	330	330
Pour point, °C	ASTM D97	-21	-18
Heat Capacity, kJ/kg K @ 20°C @ 200°C @ 300°C	-	 1.988 2.534 2.862	 1.988 2.534 2.862
Initial boiling point, °C 5%	ASTM D1160	336 383	336 383

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.