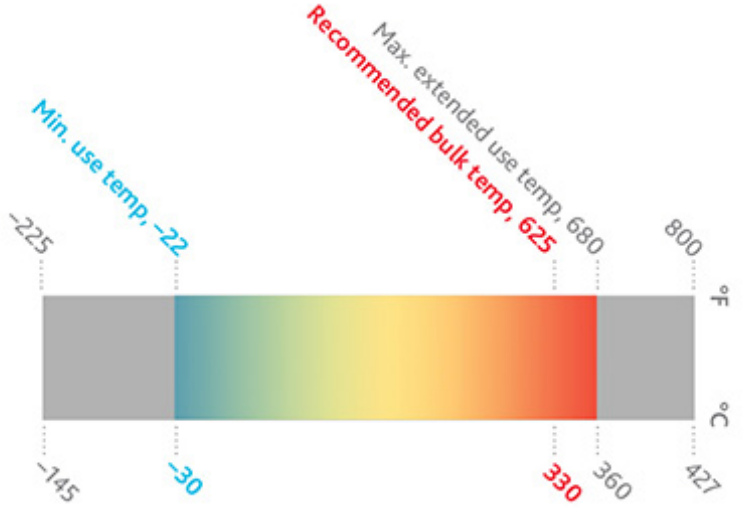
EASTMAN

Technical Data Sheet

MARLOTHERM® LH Heat Transfer Fluid

Product Description

Marlotherm LH is a low-viscosity, synthetic organic heat transfer medium for use in both the liquid and vapor phase for closed, forced-circulation heat transfer systems. Marlotherm LH offers outstanding performance and thermal stability at 330°C, which results in reliable, consistent performance over a long period of time. Marlotherm LH is recommended to be blanketed with an atmosphere of inert gas to protect against the effects of fluid oxidation on its performance and life expectancy.



Typical Properties

Property	Test Method	Typical Value, Units
Appearance		Liquid, clear
Composition		Benzyltoluene
Recommended Bulk Temperature		330 °C (625 °F)
Extended maximum use temperature		360 °C (680 °F)
Maximum film temperature		380 °C (715 °F)
Normal Boiling Point		278 °C (532 °F)
Pumpability		
@ 300mm2/s (cSt)		-67 °C (-88 °F)
@ 2000 mm2/s (cSt)		<-70 °C (<-94 °F)
Flash Point		
COC	ASTM D92	132 °C (270 °F)
Autoignition Temperature	ASTM E659	473 °C (883 °F)
	DIN 51794	510 °C (950 °F)
Pour Point	ASTM D 97	-79 °C (-110 °F)
Minimum liquid temperatures for fully developed turbulent flow (NRe > 10000)		
10 ft/s, 1-in. tube (3.048 m/s, 2.54-cm tube)		1 °C (34 °F)
20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		-17 °C (1.4 °F)
Minimum liquid temperatures for transitional region flow, (NRe > 2000)		
10 ft/s, 1-in. tube (3.048 m/s,		-37 °C (-35 °F)

2.54-cm tube) 20 ft/s, 1-in. tube (6.096 m/s, 2.54-cm tube)		-48 °C (-54 °F)
Heat of Vaporization @ 360°C		259 kJ/kg (111 Btu/lb)
Coefficient of thermal expansion @ 200°C		0.000981 /°C (0.000545 /°F)
Viscosity, Kinematic		
@ 40°C	ASTM D 445	2.78 mm^2/s
@ 100°C	ASTM D 445	1.08 mm^2/s
Molecular Weight (Average)		182.3
Pseudocritical temperature		499 °C (930 °F)
Pseudocritical pressure		35.2 bar (510 psia)
Pseudocritical density		336.7 kg/m^3 (21.02 lb/ft^3)
Liquid Density @ 25°C	ASTM D 4052	992 kg/m^3 (8.28 lb/gal)
Copper Corrosion	ASTM D 130	1a
Moisture Content, maximum	ASTM E-203	300 ppm
Dielectric Constant @ 23°C	ASTM D-924	2.7

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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