Paratherm Corporation Paratherm™ HR™ Heat Transfer Fluid

Category : Fluid

Material Notes:

Paratherm HR™ Heat Transfer Fluid is an alkylated-aromatic based heat transfer fluid formulated for closed loop liquid phase heating to 650°F in fired heaters and 675°F in waste heat recovery and full convection heaters.ApplicationsGas processingChemical processesWaste oil recoveryBiodiesel productionPlastic processingInformation Provided by Paratherm Corporation

Order this product through the following link:
http://www.lookpolymers.com/polymer_Paratherm-Corporation-Paratherm-HR-Heat-Transfer-Fluid.php

Physical Properties	Metric	English	Comments
Density	0.689 g/cc @Temperature 371 °C	0.0249 lb/in³ @Temperature 700 °F	
	0.737 g/cc @Temperature 316 °C	0.0266 lb/in³ @Temperature 600 °F	
	0.769 g/cc @Temperature 260 °C	0.0278 lb/in³ @Temperature 500 °F	
	0.817 g/cc @Temperature 204 °C	0.0295 lb/in³ @Temperature 400 °F	
	0.865 g/cc @Temperature 149 °C	0.0312 lb/in³ @Temperature 300 °F	
	0.897 g/cc @Temperature 93.3 °C	0.0324 lb/in³ @Temperature 200 °F	
	0.945 g/cc @Temperature 37.8 °C	0.0341 lb/in³ @Temperature 100 °F	
	0.993 g/cc @Temperature -17.8 °C	0.0359 lb/in³ @Temperature 0.000 °F	
Viscosity	0.32 cP @Temperature 371 °C	0.32 cP @Temperature 700 °F	
	0.34 cP @Temperature 357 °C	0.34 cP @Temperature 675 °F	
	0.36 cP @Temperature 343 °C	0.36 cP @Temperature 650 °F	

Physical Properties	Metric	English	Comments
	0.38 cP	0.38 cP	
	@Temperature 329 °C	@Temperature 625 °F	
	0.41 cP	0.41 cP	
	@Temperature 316 °C	@Temperature 600 °F	
	0.44 cP	0.44 cP	
	@Temperature 302 °C	@Temperature 575 °F	
	0.47 cP	0.47 cP	
	@Temperature 288 °C	@Temperature 550 °F	
	0.50 cP	0.50 cP	
	@Temperature 274 °C	@Temperature 525 °F	
	0.54 cP	0.54 cP	
	@Temperature 260 °C	@Temperature 500 °F	
	0.59 cP	0.59 cP	
	@Temperature 246 °C	@Temperature 475 °F	
	0.64 cP	0.64 cP	
	@Temperature 232 °C	@Temperature 450 °F	
	0.71 cP	0.71 cP	
	@Temperature 218 °C	@Temperature 425 °F	
	0.78 cP	0.78 cP	
	@Temperature 204 °C	@Temperature 400 °F	
	0.87 cP	0.87 cP	
	@Temperature 191 °C	@Temperature 375 °F	
	0.98 cP	0.98 cP	
	@Temperature 177 °C	@Temperature 350 °F	
	1.1 cP	1.1 cP	
	@Temperature 163 °C	@Temperature 325 °F	
	1.3 cP	1.3 cP	
	@Temperature 149 °C	@Temperature 300 °F	
	1.5 cP	1.5 cP	
	@Temperature 135 °C	@Temperature 275 °F	
	1.8 cP	1.8 cP	

Physical Properties	Metric	English	Comments
	@Temperature 121 °C	@Temperature 250 °F	
	2.1 cP @Temperature 107 °C	2.1 cP @Temperature 225 °F	
	2.6 cP @Temperature 93.3 °C	2.6 cP @Temperature 200 °F	
	3.8 cP @Temperature 79.4 °C	3.8 cP @Temperature 175 °F	
	5.1 cP @Temperature 65.6 °C	5.1 cP @Temperature 150 °F	
	7.9 cP @Temperature 51.7 °C	7.9 cP @Temperature 125 °F	
	12 cP @Temperature 37.8 °C	12 cP @Temperature 100 °F	
	22 cP @Temperature 23.9 °C	22 cP @Temperature 75.0 °F	
	52 cP @Temperature 10.0 °C	52 cP @Temperature 50.0 °F	
	133 cP @Temperature -3.89 °C	133 cP @Temperature 25.0 °F	
	546 cP @Temperature -17.8 °C	546 cP @Temperature 0.000 °F	
Molecular Weight	240 g/mol	240 g/mol	Average
Vapor Pressure	0.00758 bar @Temperature 163 °C	5.69 torr @Temperature 325 °F	
	0.0338 bar @Temperature 204 °C	25.4 torr @Temperature 400 °F	
	0.117 bar @Temperature 246 °C	87.8 torr @Temperature 475 °F	
	0.345 bar @Temperature 288 °C	259 torr @Temperature 550 °F	

Physical Properties	Metric	English	Comments
	0.896 bar @Temperature 329 °C	672 torr @Temperature 625 °F	
	2.00 bar @Temperature 371 °C	1500 torr @Temperature 700 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	324 µm/m-°C	180 µin/in-°F	converted from volume expansion
Specific Heat Capacity	1.84 J/g-°C @Temperature -17.8 °C	0.440 BTU/lb-°F @Temperature 0.000 °F	
	1.97 J/g-°C @Temperature 37.8 °C	0.470 BTU/lb-°F @Temperature 100 °F	
	2.09 J/g-°C @Temperature 93.3 °C	0.500 BTU/lb-°F @Temperature 200 °F	
	2.22 J/g-°C @Temperature 149 °C	0.530 BTU/lb-°F @Temperature 300 °F	
	2.34 J/g-°C @Temperature 204 °C	0.560 BTU/lb-°F @Temperature 400 °F	
	2.47 J/g-°C @Temperature 260 °C	0.590 BTU/lb-°F @Temperature 500 °F	
	2.59 J/g-°C @Temperature 316 °C	0.620 BTU/lb-°F @Temperature 600 °F	
	2.72 J/g-°C @Temperature 371 °C	0.650 BTU/lb-°F @Temperature 700 °F	
Thermal Conductivity	0.0813 W/m-K @Temperature 371 °C	0.564 BTU-in/hr-ft²-°F @Temperature 700 °F	
	0.0916 W/m-K @Temperature 316 °C	0.636 BTU-in/hr-ft²-°F @Temperature 600 °F	
	0.0986 W/m-K @Temperature 260 °C	0.684 BTU-in/hr-ft²-°F @Temperature 500 °F	
	0.105 W/m-K @Temperature 204 °C	0.732 BTU-in/hr-ft²-°F @Temperature 400 °F	
	0.111 W/m-K	0.768 BTU-in/hr-ft²-°F	

Thermal Properties	Metric	English	Comments
	@Temperature 149 °C	@Temperature 300 °F	
	0.114 W/m-K @Temperature 93.3 °C	0.792 BTU-in/hr-ft²-°F @Temperature 200 °F	
	0.118 W/m-K @Temperature -17.8 °C	0.816 BTU-in/hr-ft²-°F @Temperature 0.000 °F	
	0.118 W/m-K @Temperature 37.8 °C	0.816 BTU-in/hr-ft²-°F @Temperature 100 °F	
Maximum Service Temperature, Air	343 °C	650 °F	Fired Heaters
	357 °C	675 °F	All Others
	371 °C	700 °F	Film Temperature
Minimum Service Temperature, Air	-10.6 °C	13.0 °F	start-up temp at 300 cPs
	25.0 °C	77.0 °F	operating temp at 20 cPs
Pour Point	<= -34.4 °C	<= -30.0 °F	D97

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