DURATHERM
EXTENDED LIFE FLUIDS

Duratherm S

Over 25 years of experience developing fluids for the heat transfer industry and working with equipment manufacturers has given us a unique understanding of heat transfer fluids and what it takes to make a fluid that performs optimally in each type of application. Generic and multi use fluids just can't be all things to all applications.

Applications

Duratherm S is ideal for applications such as negative pressure mold heaters, annealing tanks, open bath forming, or any processing equipment where oxidation is prevalent and problematic. Duratherm S resists the affects of oxidation seen with most other heat transfer fluids.

High temperature stability is maintained to 650°F, this combined with a low end working temperature of -40°F also makes Duratherm S ideally suited for low temperature applications, batch processing or any application requiring a single fluid for both heating and cooling.

Longevity

Duratherm S is a high performance, extremely stable, long lasting silicone based heat transfer fluid.

Virtually unaffected by oxidation*Duratherm S is perfect for use in a variety of applications requiring a safe, non reportable, non toxic and non corrosive heat transfer fluid.

Duratherm S's benefits include:

- Superior oxidation resistance* (virtually unaffected)
- Non-fouling - extremely long life
- Low odor
- Non corrosive
- Non hazardous
- Non Toxic
- Extremely high working temperature (650°F)
- Extremely low working temperature (-40°F)

*call for application recommendations

Synopsis

Duratherm S is an extremely oxidative and thermally stable heat tranfer fluid offering precise temperature control in applications requiring the highest level of oxidative stability with high and low termperature workability.

Property	Method	Duratherm S
Appearance		Crystal Clear
Maximum use Temperature	Closed Systems	343°C 650°F
Maximum use Temperature	Open Systems	204°C 400°F
Density at 38°C, g/ml (lb/ft³)	ASTM D1298	0.958 (59.8)
Pour Point, °C (°F)	ASTM D97	-66 °C (-87°F)
Flash Point, °C (°F)	ASTM D92	323°C (615°F)
Fire Point, °C (°F)	ASTM D92	335°C (636°F)
Autoignition Temp, °C (°F)	ASTM E-659-78	436°C (818°F)
Sulphur Content weight %	X-RAY	<0.01
Carbon Residue % mass	D198A	0.01
Coefficient of Thermal Expansion, %/ °C (%/ °F)		0.105 (0.055)
Viscosity, Centistokes	ASTM D445	
at -50°C (-58°F)		334.25
at -25°C (-13°F)		148.43
at -15°C (5°F)		113.37
at 0°C (32°F)		85.47
at 38°C (100°F)		37.5
at 100°C (212°F)		16.1
at 260°C (500°F)		4.46
at 316°C (600°F)		3.37
Thermal Conductivity , W/m,K (Btu/hr F ft)		
at -17°C (0°F)		0.149 (0.081)
at 38°C (100°F)		0.130 (0.075)
at 148°C (300°F)		0.106 (0.061)
at 260°C (500°F)		0.083 (0.048)
at 315°C (600°F)		0.072 (0.042)
Heat Capacity, KJ/kg K (Btu/lb°F)		
at -17°C (0°F)		1.591 (0.382)
at 38°C (100°F)		1.687 (0.403)
at 148°C (300°F)		1.874 (0.449)
at 260°C (500°F)		2.072 (0.495)
at 315°C (600°F)		2.165 (0.518)
Vapour Pressure, kPa (psi)	ASTM D2879	
at 15°C (60°F)		0.00 (0.00)
at 204°C (400°F)		1.24 (0.18)
at 260°C (500°F)		2.07 (0.30)
at 315°C (600°F)		6.96 (1.01)

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www.heat-transfer-fluid.com
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