



DURATHERM
Heat Transfer Fluids

DURATHERM G-WS

Duratherm G-WS is a water soluble, polyalkylene glycol-based fluid specially formulated for high oxidation, open style systems. Rated for use to 260°C (500°F), Duratherm G-WS is a water soluble thermal fluid with a strong resistance to sludge and varnishing.

APPLICATION

Duratherm G-WS is engineered to withstand extreme oxidation found in annealing tanks, quenching and forming baths. Ideal for lost core molding and plastic forming or any application where parts are directly exposed to the thermal fluid – it's water solubility means cleaning parts is quick and easy and in most cases does not require more than a water rinse.

COMPATIBILITY

Duratherm G-WS is compatible with most common construction materials such as carbon steel, copper and aluminum. It is compatible with forced flow gas or electrically heated system as well as static baths and can tolerate higher watt densities of electric immersion heaters.

Duratherm G-WS being a unique water soluble formulation however, means that it is not miscible with more common hydrocarbon or chemical based thermal fluids.

LASTS LONGER

Duratherm G-WS is formulated with Duratherm's proprietary additive system giving it an incredible resistance to oxidation and thermal stability. Duratherm G-WS resists sludge and varnish formation as well as coking.

SAFE

Duratherm G-WS is one of the few fluids with a flashpoint above it's maximum rated operating temperature.

TEMPERATURE RATINGS

Maximum Bulk/Use Temp.	260°C	500°F
Maximum Film Temp.	288°C	550°F
Pour Point ASTM D97	-48°C	-54°F

SAFETY DATA

Flash Point ASTM D92	275°C	527°F
Fire Point ASTM D92	293°C	559°F
Autoignition ASTM E-659-78	400°C	752°F

THERMAL PROPERTIES

Thermal Expansion Coefficient	0.09 %/°C	0.05 %/°F
Thermal Conductivity	W/m K	BTU/hr F ft
38°C / 100°F	0.538	0.095
121°C / 250°F	0.496	0.880
260°C / 500°F	0.426	0.075
Heat Capacity	kJ/kg K	BTU/lb F
38°C / 100°F	1.958	0.467
121°C / 250°F	2.141	0.512
260°C / 500°F	2.448	0.585

PHYSICAL PROPERTIES

Appearance: light amber, clear liquid		
Viscosity ASTM D445		
cSt at 20°C / 68°F	124.40	
cSt at 40°C / 104°F	51.91	
cSt at 260°C / 500°F	0.87	
Density ASTM D1298	kg/m ³	lb/ft ³
38°C / 100°F	1020.73	63.73
121°C / 250°F	952.92	59.48
Vapor Pressure ASTM D2879	kPa	psi
38°C / 100°F	0.04	0.01
121°C / 250°F	0.51	0.09
260°C / 500°F	7.16	1.11

The values quoted are typical of normal production. They do not constitute a specification.