

# DELF 450FG

### **OVERVIEW**

**DELF 450FG** is rated for use up to 450°F and is engineered and manufactured to comply with the demands of food grade applications. **DELF 450FG** meets USDA requirements for incidental food contact (H1) and meets the requirements of 21CFR1783570 and is NSF registered.

Ideal for any application requiring food grade rated process oils such as food processing, bottling, food packaging etc.

#### **APPLICATION**

DELF 450FG is rated for use up to 450°F and is engineered and manufactured to comply with the demands of food grade applications.

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### THE DIFFERENCE

Our exclusive additive package, including a proprietary dual stage anti-oxidant, ensures long trouble free operation. DELF 450FG also incorporates metal deactivators, a seal and gasket extender, defoaming and particle suspension agents.

### **LASTS LONGER**

In the heat transfer fluid industry cost is always a concern, however fluid longevity and resistance to harmful fouling are of equal importance.

Air contact is normally detrimental to a fluid. Oxidation can cripple your system and if left unchecked will ultimately cause catastrophic failure. Unscheduled downtime due to oil failure has a high cost and negative effect on production.

The DELF product line was developed with this in mind. Most other fluids fall short in their protection from oxidation and can quickly foul a system. DELF is engineered to give unsurpassed levels of protection and service life.

## **ENVIRONMENTAL**

DELF 450FG is environmentally friendly, non-toxic, nonhazardous and non-reportable. Worker health and safety is of great concern, DELF 450FG poses no ill effect to worker safety. After its long service life it can easily be disposed of with other waste oils.

#### SYSTEM CLEANING

In our effort to truly service the heat transfer industry, we have developed 4 unique and specific heat transfer system cleaners. Ranging from preventative maintenance system cleaners to emergency downtime system revivers, we have a cleaner that fits your needs and schedule.

DELF 450FG PROPERTIES		
Appearance: colorless, clear and bright liquid		
Flash Point ASTM D92	302°F	150°C
Fire Point ASTM D92	327°F	163°C
Autoignition ASTM E-659-78	625°F	329°C
Viscosity ASTM D445		
cSt at 104°F / 40°C	4.8	
cSt at 250°F / 121°C	1.3	
cSt at 450°F / 232°C	0.6	
Pour Point ASTM D97	-49°F	-45°C
Density ASTM D1298	lb/ft3	g/ml
at 100°F / 38°C	53.1	0.850
at 250°F / 121°C	49.5	0.793
at 450°F / 232°C	44.8	0.717
Average Molecular Weight	372	
Carbon Residue ASTM D189	0.005	% Mass
Sulphur Content X-RAY	<.001	weight %
CU Strip Corrosion ASTM D130	1a	
Thermal Expansion Coefficient	0.0564 %/°F	0.1011 %/°C
Thermal Conductivity	BTU/hr F ft	W/m.K
at 100°F / 38°C	0.082	0.142
at 500°F / 260°C	0.079	0.137
at 600°F / 316°C	0.074	0.128
Heat Capacity	BTU/lb F	kJ/kg K
at 100°F / 38°C	0.510	2.135
at 250°F / 121°C	0.57	2.386
at 450°F / 232°C	0.650	2.721
at 430 1 7 232 C		
Vapor Pressure ASTM D2879	psi	kPa
	<b>psi</b> 0.09	<b>kPa</b> 0.62
Vapor Pressure ASTM D2879	•	
Vapor Pressure ASTM D2879 at 100°F / 38°C	0.09	0.62
Vapor Pressure ASTM D2879 at 100°F / 38°C at 250°F / 121°C	0.09	0.62
Vapor Pressure ASTM D2879 at 100°F / 38°C at 250°F / 121°C at 450°F / 232°C	0.09 0.33 3.23	0.62 2.28 22.27

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