

**OVERVIEW**

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

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**THE DIFFERENCE**

Our exclusive additive package, including a proprietary dual stage anti-oxidant, ensures long trouble free operation. DEL F 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 DEL F product line was developed with this in mind. Most other fluids fall short in their protection from oxidation and can quickly foul a system. DEL F is engineered to give unsurpassed levels of protection and service life.

**ENVIRONMENTAL**

DEL F 450FG is environmentally friendly, non-toxic, non-hazardous and non-reportable. Worker health and safety is of great concern, DEL F 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.

**DEL F 450FG PROPERTIES**

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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	8.34	
cSt at 250°F / 121°C	1.69	
cSt at 450°F / 232°C	0.68	
Pour Point ASTM D97	-49°F	-45°C
Density ASTM D1298	lb/ft <sup>3</sup>	g/ml
at 100°F / 38°C	51.4	0.866
at 250°F / 121°C	48.0	0.768
at 450°F / 232°C	43.4	0.722
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	0.076	0.131
at 250°F / 121°C	0.071	0.124
at 450°F / 232°C	0.066	0.114
Heat Capacity	BTU/lb F	kJ/kg K
at 100°F / 38°C	0.549	2.299
at 250°F / 121°C	0.617	2.583
at 450°F / 232°C	0.707	2.959
Vapor Pressure ASTM D2879	psi	kPa
at 100°F / 38°C	0.00	0.00
at 250°F / 121°C	0.48	0.07
at 450°F / 232°C	2.28	15.72
Distillation Range ASTM D2887	10%	516°F (289°C)
	90%	72°F (411°C)
*Maximum Film Temp.	490°F	254°C

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