



ISO-9001 Registered Quality System.  
ISO-21469 Compliant.

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## PRODUCT DATA

# LUBRIPLATE HTO SPECIAL

*\*NSF International H-1 & HT1 Registered*

### DESCRIPTION

LUBRIPLATE HTO SPECIAL is highly refined mineral-oil based heat transfer fluid designed for use up to 600°F (316°C) in closed-loop systems. LUBRIPLATE HTO Special's low pour point provides easy start up in cold environments. Lubriplate HTO Special is also formulated with oxidation inhibitors, corrosion inhibitors and metal deactivators not found in most heat transfer fluids of this type, resulting in much longer oil life. This is demonstrated in this ASTM D2440 test run by an independent laboratory.

### APPLICATIONS

Lubriplate HTO Special is ideal for closed-loop heat transfer thermal fluid systems commonly found in:

- ⇒ Food processing
- ⇒ Textile processing
- ⇒ Plastic and rubber manufacturing
- ⇒ Paper production
- ⇒ Asphalt production
- ⇒ Refineries
- ⇒ Laundries
- ⇒ Roofing

### ADVANTAGES

- ⇒ Excellent thermal stability and low volatility providing longer service life.
- ⇒ 600°F (316°C) maximum operating temperature.
- ⇒ 650°F (343°C) maximum film temperature.
- ⇒ Low viscosity and pour point for easy start up.
- ⇒ NSF H1, HT1 Food Grade Registered.
- ⇒ Environmentally friendly, non-toxic/non-hazardous.
- ⇒ Includes Lubriplate's free fluid analysis program.

### Typical Test Data – See Pages 2 & 3

#### PACKAGING AVAILABLE

- 5 Gallon Pail
- 55 Gallon Drum
- 275 Gallon Passport Bin

#### Part No.

- L0748-060
- L0748-062
- L0748-072

**\*NSF International H-1/HT1 Registration No.**  
*(Meets former USDA 1998 Guidelines)*

**158929**

*\*Registered H-1/HT1 by NSF International for use in food processing facilities as a lubricant or anti-rust agent on equipment in which there may be incidental contact involving the lubricated part and the edible product.*

### STORAGE RECOMMENDATIONS

- ⇒ Products should be stored between 40°F-120°F
- ⇒ Products should be stored in a dry covered environment
- ⇒ Products should not be stored in warm, direct sunlight
- ⇒ Improper storage conditions can significantly alter the shelf life of the product. Such conditions would include temperature, moisture, open containers, etc.

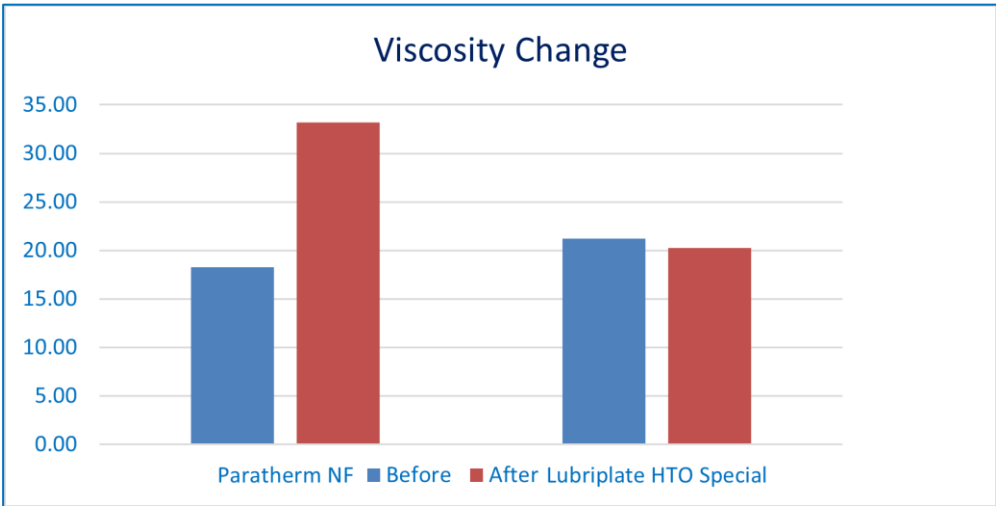
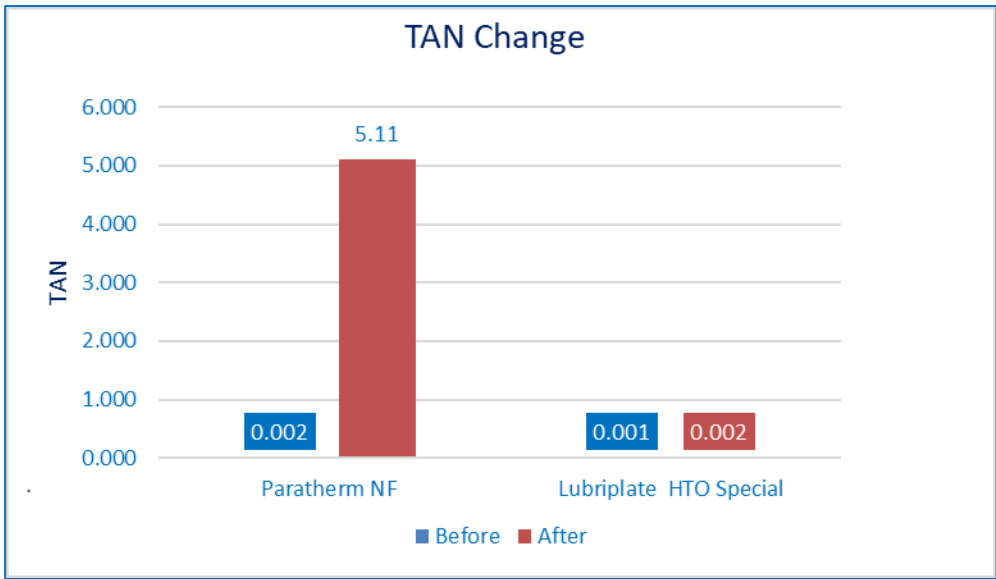


Nonfood Compounds  
H1 Registered  
ISO 21469 Certified

## Typical Test Data:

<b>THERMAL PROPERTIES</b>		
Thermal Expansion Coefficient	0.1016%/°C	0.0564%/°F
Thermal Conductivity	W/m K	BTU/hr F ft
38°C/100°F	0.128	0.074
260°C/500°F	0.107	0.062
316°C/600°F	0.104	0.060
Heat Capacity	kJ/kg K	BTU/lb F
38°C/100°F	1.938	0.463
260°C/500°F	2.960	0.707
316°C/600°F	3.215	0.768
<b>PHYSICAL PROPERTIES</b>		
Appearance: Clear and bright liquid		
Viscosity - ASTM D445		
cSt at 40°C/104°F	20.06	
cSt at 100°C/212°F	5.45	
cSt at 315°C/600°F	0.45	
Density - ASTM D1298	kg/m <sup>3</sup>	lb/ft <sup>3</sup>
38°C/100°F	838.41	52.34
260°C/500°F	698.59	43.62
316°C/600°F	663.81	41.44
Vapor Pressure - ASTM D2879	kPa	psi
38°C/100°F	0.00	0.00
260°C/500°F	5.60	0.81
316°C/600°F	22.26	3.28
Distillation Range - ASTM D2887	10%	344°C(651°F)
	90%	527°C(870°F)
Average Molecular Weight	364	
<b>TEMPERATURE RATINGS</b>		
Maximum Bulk/Use Temp	315°C/600°F	
Maximum Film Temp	343°C/650°F	
Pour Point - ASTM D97	-42°C/-43°F	
<b>SAFETY DATA</b>		
Flash Point - ASTM D93	186°C/368°F	
Flash Point - ASTM D92	213°C/415°F	
Fire Point - ASTM D92	255°C/437°F	
Autoignition - ASTM E-659-78	355°C/671°F	

<b>ASTM D2440</b>	<b>Sample ID</b>	<b>Paratherm NF Lot # 1948791</b>	<b>Lubriplate HTO Special</b>
<b>Tests</b>	<b>Method ASTM</b>	<b>Results</b>	
Initial Acid no. mgKOH/g	D974	0.002	0.001
Final Acid no. mgKOH/g	D974	5.11	0.002
Sludge content after, % wt.	D2440	0.010	<0.001
Initial viscosity cst @ 40°C	D2145	18.26	21.19
Final viscosity cst @ 40°C	D445	33.20	20.25
Initial wt. of sample used (g)		37.64	35.23
Final wt. of sample After (g)		37.92	35.22
Weight loss after 120 hours (g)		+0.28	-0.01



Paratherm NF					Lubriplate HTO Special				
Aging Time (Hours)	40°C Viscosity (cSt)	40°C Viscosity % Change	TAN (mgKOH/g)	TAN % Change	Aging Time (Hours)	40°C Viscosity (cSt)	40°C Viscosity % Change	TAN (mgKOH/g)	TAN % Change
0	18.11	0.00%	0.02	0.00%	0	20.06	0.00%	0.007	0.00%
6	20.11	11.06%	0.038	90.00%	6	20.34	1.41%	0.014	100.00%
14	21.17	16.87%	0.169	745.00%	14	20.77	3.54%	0.014	100.00%
20	22.83	26.04%	0.304	1420.00%	20	21.23	5.84%	0.021	200.00%
30	24.97	37.88%	0.515	2475.00%	30	22.03	9.84%	0.021	200.00%
80	59.21	226.94%	4.101	20405.00%	80	26.03	29.79%	0.216	2985.71%