

THERMAL HT OILS

HIGH-PERFORMANCE, LONG LIFE HEAT TRANSFER OILS

CODE: ISO 32 4192, ISO 68 4194, ISO 100 4195

THERMAL HT oils are high performance products intended for use in closed indirect heating installations. They are formulated from highly refined base stocks that are resistant to thermal cracking and chemical oxidation. The oils have good heat transfer efficiency and the viscosities are such that they can be pumped readily at both start-up and operating temperatures. The flash point of these oils will not decrease significantly in service because of the resistance to thermal cracking at the operating temperatures for which they are recommended.

Primary Market: Suitable for use in industrial, agricultural, dairy, asphalt, mining, steel works, quarries, heavy plant machinery and many more.

Recommended applications include:

- Heat transfer systems and thermal heating systems such as industrial process manufacturing.
- Can be used in open installations where fuming of the oil could be a problem
- Recommended for use in open, cold-oil sealed, indirect heating and cooling systems in all kinds of industrial processes
- Specific application ranges and advice are (temperature range for bulk oils):
 - Closed systems: up to 300C
 - Open systems: up to 160°C

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Summary of Benefits:

- ✓ Thermally stable and capable of an extremely long service life without deposit formation or viscosity increase.
- ✓ Longer changeover intervals as a result of high resistance to deposit formation, thermal cracking and outstanding oxidation stability.
- ✓ Demonstrate specific heats and thermal conductivities that provide more rapid heat dissipation
- ✓ Excellent GM Quenchometer (ASTM D-3520) performance

Applications Considerations:

THERMAL HT OILS should not be mixed with other oils since this may impair the excellent thermal and oxidation stability of **THERMAL HT OILS**; cause a change in other properties; and complicate the interpretation of analyses made to determine the oils useful life. If the oil is used above the recommended maximum temperatures, vapor lock may result unless the system is designed to operate at the higher temperature by pressurizing with an inert gas such as nitrogen. However, at higher temperatures, fluid life will be shortened because the rate of thermal degradation increases markedly as temperatures rise above the recommended limit. In well-designed systems the temperature of the oil film surrounding the heating element should be about 15oC to 30oC above the bulk oil temperature. If higher than this, the service life of the oil may be shortened and sludge and coke may be deposited which would interfere with the heat transfer rates. As with other mineral oils, **THERMAL HT OILS** should be used only in systems with forced circulation. Systems that depend on convection for circulation of the heat transfer medium do not provide a rapid enough flow to prevent local overheating and rapid deterioration of the oil. Further, these oils are not recommended for use in open systems where hot oil is exposed directly to the air. If the oil sprays or escapes from leakage points, hot **THERMAL HT OILS** may spontaneously ignite.

Pack Sizes: 20L, 205L, 1000L

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Typical Characteristics:

	ISO:	32	68	100
Specific Density at 15°C (kg/L)		0.855	0.87	0.88
Flash Point OCO (°C)		>200	>200	222
Pour Point (°C)		-16	-12	-10
Kinematic Viscosity at 40°C mm ² /s (cSt)		28	60	95
Kinematic Viscosity at 100°C mm ² /s (cSt)		4.6	7.8	10.3
Recommended Temperature °C max		300	300	300
Spontaneous Ignition Temperature °C		>400	>400	>400
Copper Corrosion (ASTM D130)		1A	1A	1A

*Typical characteristics are only a guide to industry and are not necessarily manufacturing or marketing specifications and do not constitute a legal liability.

Storage:

All packages should be stored under cover to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C.

Health, Safety and Environment

A Safety Data Sheet (SDS) is available for each product. Users should consult the SDS, and follow the precautions outlined and comply with all laws and regulations concerning its use and disposal. Used packaging material should not be incinerated or exposed to flame. After use, protect your environment. Do not pollute drains, soil or water with used product.

The Safety Data Sheet is available at Sterling Lubricants by email:

info@sterlinglubricants.com.au