

## **Thermal Oils**

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### **DELCHOM HTO 32**

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#### **General**

**DELCHOM HTO 32** is a heat transfer oil produced from highly refined mineral base oils with special additives that provide excellent resistance under severe operating conditions.

#### **Applications**

**DELCHOM HTO 32** is suitable for:

- Closed heat transfer systems up to a maximum temperature of 315°C
- Open heat transfer systems up to a maximum temperature of 150°C

#### **Advantages**

- Excellent thermal stability against cracking (does not form resins or deposits)
- Low vapor pressure, preventing pressure buildup in closed systems
- High viscosity index, ensuring stable viscosity over a wide temperature range
- High specific heat capacity, enabling the transfer and removal of large amounts of heat
- High heat transfer coefficient, allowing rapid heat supply or dissipation

### Typical Properties

| <b>DELCHOM HTO 32</b>             |       |
|-----------------------------------|-------|
| Density at 15°C, g/ml             | 0.873 |
| Kinematic viscosity at 40°C, cSt  | 32    |
| Kinematic viscosity at 100°C, cSt | 5.3   |
| Viscosity Index                   | 100   |
| Flash Point (Open Cup), °C        | 200   |
| Pour Point, °C                    | 15-   |
| Total Acid Number (TAN), max      | 0.05  |
| Color, ASTM                       | <1.0  |
| Auto-Ignition Temperature, °C     | 370   |

### Variation of Oil Properties with Temperature

|                                        | <b>300°C</b> | <b>200°C</b> | <b>100°C</b> | <b>40°C</b> | <b>20°C</b> | <b>0°C</b> |
|----------------------------------------|--------------|--------------|--------------|-------------|-------------|------------|
| Kinematic viscosity, cSt               | 0.64         | 1.3          | 5.3          | 32          | 87          | 340        |
| Density, kg/l                          | 0.685        | 0.751        | 0.817        | 0.857       | 0.870       | 0.879      |
| Specific heat, kJ/kg·°C                | 3.080        | 2.648        | 2.239        | 1.987       | 1.907       | 1.822      |
| Heat transfer coefficient, kcal/m·°C·h | 0.115        | 0.122        | 0.129        | 0.134       | 0.135       | 0.137      |
| Prandtl number                         | 11.8         | 21.2         | 75.2         | 407         | 1069        | 3975       |

### Safety

**DELCHOM HTO 32** does not pose a significant health or safety risk when used properly. Nevertheless, it is recommended to follow standard personal hygiene practices during use and to avoid prolonged skin contact with the oil.