

# Hydrogenated synthetic heat transfer oil (MDQD320)

## ● Performance Overview

Maxtop hydrotreated synthetic heat transfer oil (MTQD320) uses high-temperature and high-pressure hydrocracking refined high-saturated hydrocarbon, low sulfur and phosphorus, impurity-free base oil, added with self-developed MAXTOP Maxtop heat transfer oil composite additives, using a number of patented formula technologies, and is developed through a number of self-developed ultra-long-term high-temperature and oxidative anti-coking test technologies.



## ● Features

01

Good thermal stability

02

Acid value and carbon increase are very small

03

Excellent self-cleaning properties

04

The energy-saving effect is remarkable, the service life is very long

05

Excellent low temperature fluidity

06

Comprehensively protect the metal surface from rust

07

Good thermal oxidation stability

08

good anti-coking properties

## ● Application Scenario

Both closed or open thermal oil heating systems can be used: maximum oil film temperature 320°C, maximum main fluid temperature 300°C. The temperature of the high-level tank in contact with air in the open system is less than 70°C.



# Typical data of hydrogenated synthetic heat transfer oil (MTQD320)

| Project   | Quality indicators           |
|---|------------------------------|
| Appearance  | Colorless transparent liquid |
| Density (20°C)/(Kg/m <sup>3</sup> )                             | 837.1                        |
| Kinematic viscosity mm <sup>2</sup> /s not more than 40°C       | 20.75                        |
| Kinematic viscosity mm <sup>2</sup> /s 100°C                    | 4.217                        |
| Kinematic viscosity mm <sup>2</sup> /s 200°C                    | 1.29                         |
| Kinematic viscosity mm <sup>2</sup> /s 300°C                    | 0.76                         |
| Flash point (open),°C   | 221                          |
| Flash point ( closed cup ),°C                                   | 210                          |
| Autoignition point,°C   | 343                          |
| Pour point,°C   | -42                          |
| Copper strip corrosion ( 100°C , 3h ), level                    | 1a                           |
| Carbon residue (mass fraction), %                               | 0.02                         |
| Acid value mgKOH/g  | 0.02                         |
| Initial distillation point/°C                                   | 359                          |
| Distillation 2%/°C  | 344                          |
| Moisture (mg/kg), %   | 18                           |
| Thermal oxidation stability (175°C, 72h)                        | qualified                    |
| Thermal stability (300°C, 720h) deterioration rate is less than | 10%                          |
| 300°C high temperature/90°C oxidation for 720 hours             | pass                         |
| 300°C high temperature/120°C oxidation for 480 hours            | pass                         |
| 300°C high temperature/150°C oxidation for 240 hours            | pass                         |

| Temperature°C | Temperature kg/m <sup>3</sup> | Viscosity cSt | Thermal conductivity W/m·K | Specific heat capacity kJ/kg·K | Saturated vapor pressure psi |
|---------------|-------------------------------|---------------|----------------------------|--------------------------------|------------------------------|
| 0             | 992                           | 146           | 0.1345                     | 1.667                          | 0.00                         |
| 20            | 903                           | 70.2          | 0.1337                     | 1.821                          | 0.00                         |
| 40            | 870                           | 30.6          | 0.1314                     | 1.983                          | 0.00                         |
| 200           | 768                           | 1.1           | 0.1210                     | 2.542                          | 0.31                         |
| 300           | 699                           | 0.3           | 0.1140                     | 2.905                          | 3.22                         |
| 320           | 696                           | 0.2           | 0.1126                     | 2.929                          | 5.07                         |

● The above data are typical values of current products. The data of each batch of products in the future may fluctuate within the allowable range of Maxtor quality standards.