Alkylbenzene synthetic heat transfer oil (MTHD320)

Performance Overview

Maxtop The MTHD320 thermal conductive oil, a product of alkylated benzene synthesis, is based on refined heavy alkylated benzene or long-chain alkylated benzene as the base oil. It is supplemented with the self-developed MAXTOP Meistuo thermal conductive oil composite additive. Through a series of patented formula technologies and multiple self-developed long-term tests for anti-coking under both high temperatures and oxidation conditions, it has been successfully developed.It is completely compatible with other brands of alkylbenzene heat transfer oil.

Product features

01

Excellent low-temperature fluidity, self-cleaning property, thermal stability, thermal oxidation stability, anti-coking property, and thermal conductivity retention.

02

The acid value and the increase in residual carbon of the running alkylbenzene synthesis heat transfer oil (MTHD320) are both very small.

03

The energy-saving effect is remarkable. It has an extremely long service life. With correct usage, it can be used for over 10 years without needing to change the oil. There is no need to clean the boiler and heat exchange equipment, and it is environmentally friendly and low-carbon.

04

Proper use will prevent the formation of deposits in the boiler system, avoid coking and pipe blockage, and save energy consumption.

Application scenario

Both closed-type and open-type heat transfer oil heating systems can be used: the maximum oil film temperature is 320℃, and the maximum main body temperature is 300℃. The temperature of the upper tank of the open system in contact with the air is less than 70℃.

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Typical data of alkylbenzene synthetic heat transfer oil (MTHD320)

Project	Quality indicators
Appearance	Light yellow to colorless liquid
Density (at 20℃) / (Kg/m3)	869.8
Viscosity at 40℃, mm2/s	25.73
Viscosity at 100℃, mm2/s	4.87
Viscosity at 200℃, mm2/s	1.41
Viscosity at 300℃, mm2/s	0.81
Flash point (open cup), ℃	216
Flash point (closed cup), ℃	202
Autoignition point, ℃	343
Pour point, ℃	-55
Copper strip corrosion (100℃, 3h), grade	1a
Residues (mass fraction), %	0.01
Acid value, mgKOH/g	0.01
Initial boiling point, ℃	375
Boiling point at 2% distillation, ℃	361
Water content (mg/kg), %	16
Thermal oxidation stability (175℃, 72h)	Qualified
Thermal stability (300℃, 720h) - deterioration rate less than	10%
At 300℃ under high temperature / at 90℃ under oxidation 720 hours	By
At 300℃ under high temperature / at 120℃ under oxidation 480 hours	By
At 300℃ under high temperature / at 150℃ under oxidation 240 hours	By

- The above data represent the typical values of the current product. The data for each subsequent batch of products may vary within the allowable range set by Meistao's quality standards.

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Performance data of alkylbenzene synthetic heat transfer oil (MTHD320) at different temperatures

Temperature (℃)	Density (kg/m³)	Specific heat (kJ/kg·K)	Thermal conductivity (W/m·K)	Viscosity (kinematic viscosity)(mm²/s)	Saturated vapor pressure(kPa)
-40	912.3	1.62	0.128	19028.45	
-30	905.6	1.65	0.131	4544.96	
-20	899.0	1.68	0.134	1398.00	
-10	892.5	1.71	0.137	526.36	
0	886.0	1.74	0.140	232.50	
10	879.6	1.77	0.143	116.83	
20	873.2	1.80	0.146	65..15	
30	866.9	1.83	0.149	39.55	
40	860.6	1.86	0.152	25.73	
50	854.4	1.89	0.155	17.72	
60	848.2	1.92	0.158	12.80	
70	842.0	1.95	0.161	9.61	
80	835.9	1.98	0.164	7.46	
90	829.8	2.01	0.167	5.95	0.352
100	823.7	2.04	0.170	4.87	0.483
110	817.7	2.07	0.173	4.06	0.654
120	811.7	2.10	0.176	3.44	0.874
130	805.7	2.13	0.179	2.97	1.154
140	799.8	2.16	0.182	2.59	1.506
150	793.9	2.19	0.185	2.29	1.945
160	788.0	2.22	0.188	2.05	2.486
170	782.1	2.25	0.191	1.84	3.148
180	776.3	2.28	0.194	1.67	3.952
190	770.5	2.31	0.197	1.53	4.920
200	764.7	2.34	0.200	1.41	6.078
210	758.9	2.37	0.203	1.31	7.453
220	753.2	2.40	0.206	1.22	9.076
230	747.5	2.43	0.209	0.14	10.980
240	741.8	2.46	0.212	1.08	13.200
250	736.1	2.49	0.215	1.02	15.770
260	730.5	2.52	0.218	0.96	18.730
270	724.9	2.55	0.221	0.92	22.120
280	719.3	2.58	0.224	0.88	25.990
290	713.7	2.61	0.227	0.84	30.390
300	708.2	2.64	0.230	0.81	35.380

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