

Lubricants for industry.

Diatherm S



Synthetic fluid for heat transfer.

> Use

- Synthetic heat-transfer fluid formulated with alkylbenzene developed for use as a heat transmitter in systems where the use of water or steam is not possible.
- Its formulation has been designed to improve pumpability (which facilitates start-up at low temperatures) and extend the operating period of the oil, compared to other mineral oils.

> Benefits

- Optimal heat transfer.
- Greater efficiency in heat transfer than when using mineral fluids.
- Exceptional thermal stability and oxidation. Minimal formation of carbonaceous waste.
- Does not produce corrosion in the metals used in heat transfer systems.
- Longer life than mineral fluids.
- Allows for work at lower pressures than with steam.
- Its low pour point allows for easy start-ups and good pumpability at very low temperatures.

> Specifications

- DIN 51522
- ISO 6743 L-QB

> Physical and chemical properties

Parameter	Units	Method	Diatherm S
Range of application temperatures	°C	-	-40 to 300 (max. 310)
Density at 15°C	Kg/l	ASTM D-4052	0.874
Flash point, COC	°C	ASTM D-92	216
Pour point	°C	ASTM D-5950	-45
Viscosity at 40°C	cSt	ASTM D-445	20.5
Viscosity at 100°C	cSt	ASTM D-445	3.82
Copper corrosion (3 h, 100°C)	-	ASTM D-130	1A
Distillation	-	-	-
Starting point	°C	-	340
5%	°C	-	350
Period	°C	ASTM D-86	380

> Design data for thermal systems

The typical values of the characteristics appearing in the table are average values given for guidance purposes only and do not constitute a guarantee. These values may be modified without any prior warning.

Temperature (°C)	Specific heat (J/g°C)	Steam pressure (psia)	Density (g/cm3)	Viscosity (cSt)
20	1.9175	<0.002	0.8672	54.7370
40	1.9863	<0.002	0.8549	22.0300
60	2.0582	<0.002	0.8426	11.1011
80	2.1103	<0.002	0.8302	6.5227
100	2.1791	0.0020	0.8177	4.2700
120	2.2442	0.0050	0.8051	3.0232
140	2.3247	0.0130	0.7924	2.2697
160	2.3989	0.0300	0.7796	1.7827
180	2.4732	0.0670	0.7667	1.4509
200	2.5303	0.1390	0.7537	1.2152
210	2.5577	0.1960	0.7472	1.1224
220	2.5878	0.2710	0.7406	1.0422
230	2.6023	0.3710	0.7339	0.9725
240	2.6371	0.5000	0.7272	0.9116
250	2.6425	0.6700	0.7205	0.8581
260	2.6852	0.8900	0.7137	0.8108
270	2.7188	1.2000	0.7068	0.7689
280	2.7502	1.5000	0.6999	0.7315
290	2.7913	1.9000	0.6930	0.6981

> Health & safety and environment

A Material Safety Data Sheet providing information on product hazards, handling precautions, first aid measures, and relevant environmental data is available for this product as per applicable legislation.