

# JARYTHERM<sup>®</sup> DBT



Heat transfer fluid

Synthetic heat transfer fluid, made from a blend of dibenzyltoluene isomers.

## APPLICATIONS

Heat transfer installations  
by fluid circulation

- Operating from 0°C to + 350 °C in the bulk (370 °C in the film) without air contact. **JARYTHERM<sup>®</sup> DBT** is mainly used in the chemical and plastics transformation industries (barrel extruders).

## SPECIFICATIONS

- ISO 6743/12 class L-QD-350

**JARYTHERM<sup>®</sup> DBT** successfully passes the following Thermal Stability tests (1000h, 350°C):

- ASTM D6743
- DIN 51528
- GB/T 23800-2009

## ADVANTAGES

Extended drain interval

Working safety

- **Excellent stability to thermal cracking**

Can be used for a long period without the formation of carbon deposits which can foul the circuit. Preserves the heat exchange characteristics of the installation.

- **Resistance to oxidation**

A thermal fluid must show good resistance to oxidation, even with limited exposure to oxygen in the air. **JARYTHERM<sup>®</sup> DBT** offers this characteristics.

TYPICAL PROPERTIES	METHODS	UNITS	JARYTHERM <sup>®</sup> DBT			
			20 °C	100 °C	200 °C	300 °C
Density	ISO 3675	kg/m <sup>3</sup>	1043	987	914	834
Kinematic viscosity	ISO 3104	mm <sup>2</sup> /s	50	3	0.82	0.44
Specific heat capacity	-	kJ/kg °C	1.60	1.81	2.10	2.51
Thermal conductivity	-	W/m °C	0.128	0.121	0.113	0.105

Above characteristics are mean values given as an information.

TYPICAL CHARACTERISTICS	METHODS	UNITS	JARYTHERM® DBT
Flash point OC	ISO 2592	°C	200
Fire point	ISO 2592	°C	230
Pour point	ISO 3016	°C	- 34
Boiling point (under 760 mm of mercury)	-	°C	390
Total Decomposition Rate – 1000h, 350°C.	GB23800-2009	%	6.9
Operating range	-		
- in the bulk		°C	0 / + 350
- in the film		°C	370

Above characteristics are mean values given as an information.

A few useful conversion factors:

1 Kcal/kg. °C = 4184 J/Kg. °C

1 Kcal/m.h. °C = 1.162 W/m. °C

1 mm Hg = 133 Pa

JARYTHERM® DBT is registered trademark of ARKEMA.

## Jarytherm® DBT

### Thermodynamic Data

T (°C)	Specific Heat (kJ/kg.°C)	Thermal Conductivity (W/m.°C)	Density (kg/m <sup>3</sup> )	Vapour pressure (bar)	Dynamic Viscosity (mPa.s)	Kinematic Viscosity (mm <sup>2</sup> /s)
0	1,520	0,130	1059	0,00	274,1	258,8
20	1,580	0,128	1044	0,00	52,3	50,1
40	1,650	0,126	1029	0,00	17,45	17,0
60	1,710	0,125	1014	0,00	7,98	7,87
80	1,780	0,123	1000	0,00	4,43	4,43
100	1,840	0,121	985	0,00	2,80	2,84
120	1,900	0,120	970	0,00	1,94	2,00
140	1,970	0,118	955	0,00	1,43	1,50
160	2,030	0,116	940	0,00	1,11	1,18
180	2,090	0,115	925	0,00	0,89	0,96
200	2,160	0,113	911	0,01	0,74	0,81
220	2,220	0,112	896	0,01	0,62	0,69
240	2,290	0,110	881	0,03	0,54	0,61
260	2,350	0,108	866	0,05	0,47	0,54
280	2,410	0,107	851	0,10	0,42	0,49
300	2,480	0,105	836	0,17	0,37	0,44
320	2,540	0,103	821	0,29	0,34	0,41
340	2,600	0,102	807	0,46	0,31	0,38
360	2,670	0,100	792	0,71	0,28	0,35
380	2,730	0,098	777	1,06	0,26	0,33

#### TOTAL LUBRIFIANTS INDUSTRIE

12-10-2016 (supersedes 20-01-2016)

JARYTHERM® DBT

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This lubricant used as recommended and for the application for which it has been designed does not present any particular risk.

A material safety data sheet conforming to the regulations in use in the E.C. can be obtained from your local commercial adviser or down loaded from [www.quick-fds.com](http://www.quick-fds.com)