

Dowtherm J



Synthetic Organic Heat Transfer Fluid - Liquid and Vapor Phase Data

DOWTHERM* J heat transfer fluid is a mixture of isomers of an alkylated aromatic specially engineered for demanding low-temperature applications in liquid phase pressurized systems. DOWTHERM J fluid offers outstanding low-temperature pumpability and excellent thermal stability for protection against accidental overheating. Recommended use temperature range: -100 °F to 600 °F (-80 °C to 315 °C). DOWTHERM J fluid can also be used in vapor phase systems operating from 358 °F to 600 °F (181 °C to 315 °C).

Suitable applications: Single fluid heating and cooling

Typical Properties of Dowtherm J Fluid(a)

DOWTHERM J Heat Transfer Fluid

Composition: Mixture of Isomers of an Alkylated Aromatic

Color: Clear, Colorless Solution

Property	English Units	SI Units
Freeze Point	< -100 °F	< -81 °C
Boiling Point	358°F	181°C
Flash Point (b)	136°F	57°C
Fire Point (c)	140°F	60°C
Autoignition Temperature(d)	788°F	420°C
Density @77°F (25°C)	54.13 lb/ft ³	860 kg/m ³
Surface Tension in Air @ 77°F (25°C)	0.28 Dynes/cm	
Estimated Critical Pressure	28 atm	28.4 bar
Estimated Critical Temperature	721 °F	383 °C
Estimated Critical Volume	0.0585 ft ³ /lb	3.65 l/kg
Average Molecular Weight	134	
Heat of Combustion	17,800 Btu/lb	41,400 kJ/kg

a)Not to be construed as specifications

(b)Closed Cup

(c)C.O.C.

(d)The old ASTM procedure, D-2155-66, has been withdrawn by the testing society and replaced by ASTM E659-78