

**DOWTHERM™ G****Product Type** Synthetic organic heat transfer fluid**Applications**

- Liquid-phase heat transfer systems

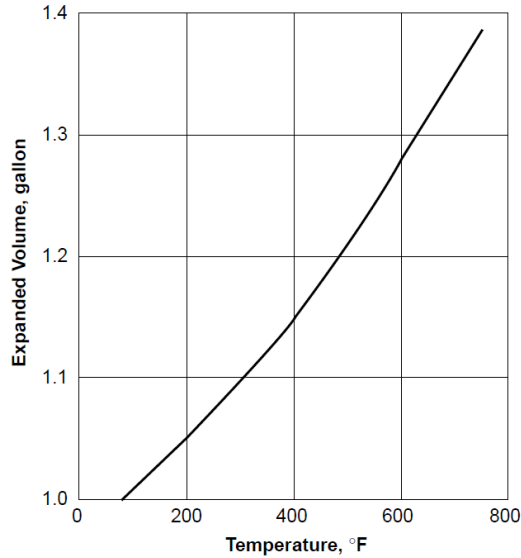
**Recommended Use Temperature Range** 20°F to 675° (-6°C to 360°C)**Description** DOWTHERM™ G heat transfer fluid contains a mixture of di- and tri-aryl compounds that provides unequalled performance in liquid phase heat transfer systems. It is the most thermally stable low pressure liquid-phase heat transfer fluid on the market today and has excellent flow characteristics at low temperatures.**Typical Properties†**

<b>Composition</b>		
Mixture of di- and tri-aryl compounds		
<b>Color</b>	Light amber to brown	
<b>Property</b>	<b>English Units</b>	<b>SI Units</b>
<b>Crystal Point</b>	Below 40°F	Below 4°C
<b>Atmospheric Reflux Boiling Point</b>	552°F	289°C
<b>Flash Point<sup>1</sup></b>	280°F	137°C
<b>Autoignition Temperature<sup>2</sup></b>	810°F	432°C
<b>Pseudo-critical constants:</b>		
T <sub>c</sub>	1018°F	548°C
P <sub>c</sub> , atm	27.2	27.56 bar
V <sub>c</sub> , ft. <sup>3</sup> /lb.	0.0505	3.150 l/kg
<b>Average Molecular Weight</b>	204.6	
<b>Density at 75°F</b>	8.71 lb./gal.	
<b>Density at 25°C</b>	1043 kg/m <sup>3</sup>	

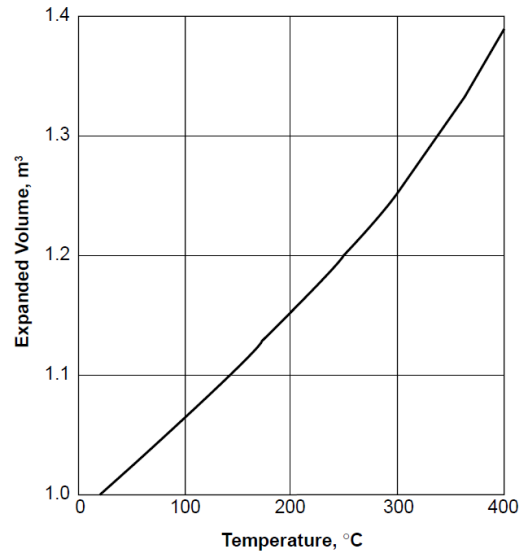
†Not to be construed as specifications.

<sup>1</sup>C.O.C.<sup>2</sup>The old ASTM procedure, D-2155-66 has been withdrawn by the testing society and replaced by ASTM E 659-78.

**Thermal Expansion of DOWTHERM G Fluid  
(English Units) (Basis: 1 gallon at 77°F)**



**Thermal Expansion of DOWTHERM G Fluid  
(SI Units) (Basis: 1 m<sup>3</sup> at 25°C)**



**Saturation Liquid Properties of DOWTHERM™ G Fluid (English Units)**

Temperature °F	Specific Heat Btu/(lb.)(°F)	Density lb./ft. <sup>3</sup>	Thermal Conductivity Btu/(hr.)(ft. <sup>2</sup> )(°F/ft.)	Viscosity (cps)	Vapor Pressure
25	0.349	66.59	0.0746	51.1	0.00
50	0.361	65.91	0.0737	20.4	0.00
75	0.373	65.24	0.0728	10.6	0.00
100	0.384	64.57	0.0718	6.51	0.00
125	0.396	63.90	0.0709	4.44	0.00
150	0.407	63.22	0.0700	3.24	0.00
175	0.419	62.55	0.0691	2.48	0.01
200	0.431	61.88	0.0681	1.97	0.02
225	0.442	61.21	0.0672	1.61	0.04
250	0.454	60.53	0.0663	1.34	0.09
275	0.466	59.86	0.0653	1.13	0.16
300	0.477	59.19	0.0644	0.97	0.29
325	0.489	58.52	0.0635	0.84	0.48
350	0.500	57.84	0.0625	0.73	0.79
375	0.512	57.17	0.0616	0.64	1.24
400	0.524	65.50	0.0607	0.57	1.89
425	0.535	55.83	0.0597	0.51	2.81
450	0.547	55.15	0.0588	0.46	4.06
475	0.558	54.48	0.0579	0.41	5.73
500	0.570	53.81	0.0570	0.37	7.93
525	0.582	53.13	0.0560	0.34	10.76
550	0.593	52.46	0.0551	0.31	14.35
575	0.605	51.79	0.0542	0.29	18.83
600	0.616	51.12	0.0532	0.26	24.35
625	0.628	50.44	0.0523	0.24	31.07
650	0.640	49.77	0.0514	0.23	39.15
675	0.651	49.10	0.0504	0.21	48.75
700	0.663	48.43	0.0495	0.20	60.08
725	0.674	47.75	0.0486	0.18	73.29

**Saturation Liquid Properties of DOWTHERM™ G Fluid (SI Units)**

Temperature °C	Specific Heat kJ/kg K	Density kg/m <sup>3</sup>	Thermal Conductivity W/m K	Viscosity mPa·s	Vapor Pressure (bar)
-5	1.458	1066.2	0.1293	55.9	0.00
15	1.528	1050.7	0.1270	15.7	0.00
35	1.598	1035.3	0.1247	7.11	0.00
55	1.668	1019.8	0.1224	4.09	0.00
75	1.738	1004.3	0.1201	2.69	0.00
95	1.808	988.8	0.1177	1.92	0.00
115	1.878	973.3	0.1154	1.45	0.00
135	1.948	957.8	0.1131	1.13	0.01
155	2.018	942.3	0.1108	0.91	0.02
175	2.088	926.8	0.1085	0.74	0.05
195	2.158	911.3	0.1061	0.62	0.10
215	2.228	895.8	0.1038	0.52	0.18
235	2.297	880.3	0.1015	0.45	0.30
255	2.367	864.8	0.0992	0.39	0.49
275	2.437	849.3	0.0969	0.34	0.76
295	2.507	833.8	0.0945	0.30	1.14
315	2.577	818.3	0.0922	0.27	1.66
335	2.647	802.8	0.0899	0.24	2.35
355	2.717	787.3	0.0876	0.21	3.24
375	2.787	771.8	0.0853	0.19	4.37

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