

Table 1-38. THERMAL PROPERTIES OF COMMON LIQUIDS*

At 1.0 Atm Pressure, 77°F (25°C), Except as Noted

For other properties of liquids, see Table 1-37.

Common name	Specific heat	Thermal conductivity, Btu/ft hr °F	Freezing point, °F	Latent heat of fusion, Btu/lb	Boiling point, °F	Latent heat of evaporation, Btu/lb	Coefficient of cubical expansion per °F
Acetic acid	0.522	0.099	62	77.7	245	173	0.0006
Acetone	0.514	0.093	-137.4	42.3	133	223	0.00082
Alcohol, ethyl	0.584	0.099	-174.2	46.4	172.96	364	0.0006
Alcohol, methyl	0.606	0.117	-143.7	42.5	148.4	474	0.00075
Alcohol, propyl	0.567	0.093	-197	37.2	208	335	—
Ammonia (aqua)	1.047	0.204	—	—	—	—	—
Benzene	0.414	0.083	41.96	54.4	176.2	168	0.0007
Bromine	0.113	—	-17.15	28.7	137.3	83	0.00065
Carbon disulfide	0.237	0.093	-169.5	24.80	115.26	151.2	0.0007
Carbon tetrachloride	0.207	0.060	-9.04	74.8	169.7	83.5	0.0007
Castor oil	0.47	0.104	14.1	—	—	—	—
Chloroform	0.25	0.068	-82.3	33.14	142.2	106.4	0.00073
Decane	0.528	0.085	-21.4	86.6	345.3	113	—
Dodecane	0.528	0.081	-14.74	93.0	421.3	110	—
Ether	0.529	0.075	-177	41.4	94.2	160	0.0009
Ethylene glycol	0.565	0.149	8.6	77.9	387	344	—
Fluorine							
refrigerant R-11	0.208†	0.054†	-168	—	74.9	77.58‡	—
Fluorine							
refrigerant R-12	0.232†	0.041†	-252	14.8	-21.6	71.04‡	—
Fluorine							
refrigerant R-22	0.300†	0.050†	-256	78.7	-41.4	100.05‡	—
Glycerine	0.627	0.166	17.0	86	554.5	419	0.0003
Heptane	0.536	0.074	-131.1	60.2	209.1	137	—
Hexane	0.541	0.072	-139.3	65.3	155.65	157	—
Iodine	0.513	—	236.3	26.74	363.8	70.71	—
Kerosene	0.5	0.084	—	—	—	108	—
Linseed oil	0.44	—	-4	—	549	—	—
Mercury	0.0333	—	-38.0	5.0	674	126.9	0.0001
Octane	0.514	0.076	-70.2	78.0	257	128	0.0004
Phenol	0.342	0.11	109.4	52.2	360	—	0.0005
Propane, R-290	0.576†	—	-305.8	34.38	-43.73	184‡	—
Propylene	0.682	—	-301.5	30.70	-53.86	147	—
Propylene glycol	0.598	—	-76	—	369	393	—
Sea water	0.90-98	—	27.5	—	—	—	—
Toluene	0.41	0.077	-139	30.90	230.8	156	—
Turpentine	0.425	0.070	-75	—	320	126	0.00055
Water	0.998	0.352	32	143.3	212	970.3	0.00011

†At 75°F, liquid.

‡At 14.7 psia, saturation temperature.

*Compiled from several sources.