



# Technical

## Properties of Liquids and Gases

**Table 3: Properties of Liquids**

Liquids	Density (at or near room temp.) (lb/cu.ft.)	Average Specific Heat (BTU/lb/°F)	Boiling Point (°F)	Heat of Vaperation (BTU/lb)
Acetic Acid 20%	64.1	.91	214 ±	810 ±
Alcohol (Ethyl)	49.6	.60	173	367
Benzene	56	.45	175	166
Brine (25% NaCL)	74	.81	221 ±	728 ±
Caustic Soda (18% NaOH)	74.9	.84	221 ±	795 ±
Dowtherm A	66.1	.44	496	42.2
Ether	46	.503	95	160
Ethylene Glycol	70.5	.602	387	—
Fish Oil	70.5	.602	387	—
Fuel Oil, Bunker C	61	.50	—	145-150
Freon 12	82.7@70psig	.23	-21.6	62
Gasoline	48.6	.675	158-194	137
Glue (1/2 dry glue, 1/2 water)	69	.895	—	—
Glycerine	79	.58	554	—
Kerosene	51.5	.47	—	108
Mercury	845	.0333	675	117
Milk	64.5	1(approx.)	—	—
Molasses	87.4	.6	—	—
NaK (78%K)	46.2	.21	1446	—
Nitric Acid 7%	64.7	.92	220 ±	918 ±
Oil, Cottonseed	60	.47	—	—
Oil, Machine	58	.40	—	—
Oil, Olive	58	.471	570 ±	—
Paraffin (melted)	47.1	.71	1400	63
Petroleum	56	.51	—	—
Potassium (K)	44.6	.18	—	—
Sodium (Na)	51.2	.3	1621	1810
Sulfur (melted)	—	.234	601	652
Thermonal FR-2	90.6	.3	648 ±	—
Turpentine	54.3	.41	318	123
Vegetable Oil	57.5	.43 ±	—	—
Water	62.3	1.0	212	970

**Table 4: Properties of Gases**

Gasses	Density (at or near room temp. and atmospheric pressures) (lbs/cu.ft.)	Specific Heat (BTU/LB/°F)
Air @ 80°F	.073	.240
Air @ 400°F	.046	.245
Ammonia	.044	.523
Acetylene	.073	.35
Argon	.102	.125
Carbon Dioxide	.113	.199
Carbon Monoxide	.072	.248
Chlorine	.184	.115
Hydrochloric Acid	.094	.194
Hydrogen	.0052	3.39
Methane	.041	.528
Nitrogen	.072	.248
Oxygen	.082	.218
Sulphur Dioxide	.172	.152
Water Vapor @ 212°F	.037	.482