



English version



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Technology of components used in heating.

## Chapter 40

### Table of liquids specific heat

Liquids	Specific heat ( $c_p$ )			Density ( $\rho$ )	
	SI	British/US	Metric	SI	British/US
	$\text{kJ}/(\text{kg} \cdot ^\circ\text{C})$	$\text{Btu}/(\text{lb}_m \cdot ^\circ\text{F})$	$\text{kcal}/(\text{kg} \cdot ^\circ\text{C})$	$\text{kg}/\text{m}^3$	$\text{Lb}/\text{ft}^3$
Acetic acid	2.18	0.51	0.51	1048	65.4
Alcohol, ethyl, 95% @ 0°C (32°F) (ethanol)	2.3	0.55	0.55	807	50.4
Ammonia, @ 40°C (104°F)	4.86	1.16	1.16	767	47.9
Dowtherm heat transfer fluid @ 50°C (120°F)	1.55	0.37	0.37	944	58.9
Ethylene glycol 25% by volume /water, @70°C (160°F)	3.93	0.94	0.94	1018	63.5
Ethylene glycol 30% by volume /water, @ 70°C (160°F)	3.87	0.925	0.925	1025	64.0
Ethylene glycol 40% by volume /water, @ 70°C (160°F)	3.73	0.89	0.89	1038	64.8
Ethylene glycol/water, 50% by volume @ 70°C (160°F)	3.56	0.85	0.85	1050	65.5
Ethylene glycol, pure	2.36	0.56	0.56	1120	69.9
Freon R-12 saturated @ 50°C (120°F)	1.02	0.244	0.244	1310	81.8
Fuel Oil min.	1.67	0.4	0.4	809	50.5
Fuel Oil max.	2.09	0.5	0.5	944	58.9
Gasoline	2.22	0.53	0.53	673	42.0
Glycerine	2.43	0.58	0.58	1261	78.7
Kerosene	2.01	0.48	0.48	809	50.5
Milk	3.93	0.94	0.94	1028	64.2
Oil, vegetable	1.67	0.4	0.4	921	57.5
Olive oil	1.97	0.47	0.47	929	58.0
Paraffin	2.13	0.51	0.51	897	56.0
Soya bean oil	1.97	0.47	0.47	920	57.4
Water, fresh	4.19	1	1	1000	62.4
Water, sea @ 2°C (36°F)	3.93	0.94	0.94	1028	64.2

## Table of liquids specific heat

**M-8 Specific heat ( $c_p$ ) and density ( $\rho$ ) of main liquids**

Liquids	Specific heat ( $c_p$ )			Density ( $\rho$ )	
	SI	British/US	Metric	SI	British/US
	kJ/(kg°C)	Btu/(lb <sub>m</sub> °F)	kcal/(kg°C)	kg/m <sup>3</sup>	Lb/ft <sup>3</sup>
Acetic acid	2.18	0.51	0.51	1048	65.4
Alcohol, ethyl, 95%, @ 0°C (32°F) (ethanol)	2.3	0.55	0.55	807	50.4
Ammonia, @ 40°C (104°F)	4.86	1.16	1.16	767	47.9
Dowtherm heat transfer fluid @ 50°C (120°F)	1.55	0.37	0.37	944	58.9
Ethylene glycol 25% by volume in water, @ 70°C (160°F)	3.93	0.94	0.94	1018	63.5
Ethylene glycol 30% by volume in water, @ 70°C (160°F)	3.87	0.925	0.925	1025	64.0
Ethylene glycol 40% by volume in water, @ 70°C (160°F)	3.73	0.89	0.89	1038	64.8
Ethylene glycol/water, 50% by volume in water @ 70°C (160°F)	3.56	0.85	0.85	1050	65.5
Ethylene glycol, pure, @ 70°C (160°F)	2.36	0.56	0.56	1120	69.9
Freon R-12 saturated @ 50°C (120°F)	1.02	0.244	0.244	1310	81.8
Fuel Oil min.	1.67	0.4	0.4	809	50.5
Fuel Oil max.	2.09	0.5	0.5	944	58.9
Gasoline	2.22	0.53	0.53	673	42.0
Glycerine	2.43	0.58	0.58	1261	78.7
Kerosene	2.01	0.48	0.48	809	50.5
Milk	3.93	0.94	0.94	1028	64.2
Oil, vegetable	1.67	0.4	0.4	921	57.5
Olive oil	1.97	0.47	0.47	929	58.0
Paraffin	2.13	0.51	0.51	897	56.0
Soya bean oil	1.97	0.47	0.47	920	57.4
Water, fresh @ 20°C	4.19	1	1	1000	62.4
Water, sea @ 2°C (36°F)	3.93	0.94	0.94	1028	64.2