Table CG-33. Physical Properties of Liquids and Solids

	Liquid (L) or Solid (S)	sp gr @ 60-70°F	sp ht @ 60°F Btu/lb-°F
Acetic acid 100%	L	1.05	0.48
Acetic acid 10%	L	1.01	0.96
Acetone, 100%	**L**	**0.78**	**0.514**
Alcohol, ethyl, 95%	L	0.81	0.60
Alcohol, methyl, 90%	L	0.82	0.65
Aluminum	**S**	**2.64**	**0.23**
Ammonia, 100%	L	0.61	1.10
Ammonia, 26%	L	0.90	1.00
Aroclor	**L**	**1.44**	**0.28**
Asbestos board	S	0.88	0.19
Asphalt	L	1.00	0.42
Asphalt, solid	**S**	**1.1-1.5**	**0.22-0.4**
Benzene	L	0.84	0.41
Brickwork & Masonry	S	1.6-2.0	0.22
Brine - calcium chloride, 25%	**L**	**1.23**	**0.689**
Brine - sodium chloride, 25%	L	1.19	0.786
Clay, dry	S	1.9-2.4	0.224
Coal	**S**	**1.2-1.8**	**0.26-0.37**
Coal tars	S	1.20	0.35@40
Coke, solid	S	1.0-1.4	0.265
Copper	**S**	**8.82**	**0.10**
Cork	S	0.25	0.48
Cotton, cloth	S	1.50	0.32
Cottonseed oil	**L**	**0.95**	**0.47**
Dowtherm A	L	0.99	0.63
Dowtherm C	L	1.10	0.35-0.65
Ethylene glycol	**L**	**1.11**	**0.58**
Fatty acid - palmitic	L	0.85	0.653
Fatty acid - stearic	L	0.84	0.550
Fish, fresh, average	**S**		**0.75-0.82**
Fruit, fresh, average	S		0.80-0.88
Gasoline	L	0.73	0.53
Glass, Pyrex	**S**	**2.25**	**0.20**
Glass, wool	S	0.072	0.157
Glue, 2 parts water 1 part dry glue	L	1.09	0.89
Glycerol, 100% (glycerin)	**L**	**1.26**	**0.58**
Honey	L		0.34
Hydrochloric acid, 31.5% (muriatic)	L	1.15	0.60
Hydrochloric acid, 10% (muriatic)	**L**	**1.05**	**0.75**
Ice	S	0.90	0.50
Ice Cream	S		0.70
Lard	**S**	**0.92**	**0.64**
Lead	S	11.34	0.031
Leather	S	0.86-1.02	0.36
Linseed oil	**L**	**0.93**	**0.44**
Magnesia, 85%	L	0.208	0.27
Maple syrup	L		0.48
Meat, fresh, average	**S**		**0.780**
Milk	L	1.03	0.90-0.93
Nickel	S	8.90	0.11
Nitric acid, 95%	**L**	**1.50**	**0.50**
Nitric acid, 60%	L	1.37	0.64
Nitric acid, 10%	L	1.05	0.90
No. 1 Fuel Oil (kerosene)	**L**	**0.81**	**0.47**
No. 2 Fuel Oil	L	0.86	0.44
No. 3 Fuel Oil	L	0.88	0.43
No. 4 Fuel Oil	**L**	**0.90**	**0.42**
No. 5 Fuel Oil	L	0.93	0.41
No. 6 Fuel Oil	L	0.95	0.40

Table CG-33. (cont.) Physical Properties of Liquids and Solids

	Liquid (L) or Solid (S)	sp gr @ 60-70°F	sp ht @ 60°F Btu/lb-°F
API Mid-continent crude	L	.085	0.44
API gas oil	L	0.88	0.42
Paper	**S**	**1.7-1.15**	**0.45**
Paraffin	S	0.86-0.91	0.62
Paraffin, melted	L	0.90	0.69
Phenol (carbolic acid)	**L**	**1.07**	**0.56**
Phosphoric acid, 20%	L	1.11	0.85
Phosphoric acid, 10%	L	1.05	0.93
Phthalic anhydride	**L**	**1.53**	**0.232**
Rubber, vulcanized	S	1.10	0.415
SAE - SW (#8 machine lube oil)	L	0.88	
SAE - 20 (#20 machine lube oil)	**L**	**0.89**	
SAE - 30 (#30 machine lube oil)	L	0.89	
Sand	S	1.4-1.76	0.19
Sea water	**L**	**1.03**	**0.94**
Silk	S	1.25-1.35	0.33
Sodium hydroxide, 50% (caustic acid)	L	1.53	0.78
Sodium hydroxide, 30%	**L**	**1.33**	**0.84**
Soybean oil	L	0.92	0.24-0.33
Steel, mild @ 70	S	7.90	0.11
Steel, stainless, 300 series	**S**	**8.04**	**0.12**
Sucrose, 60% sugar syrup	L	1.29	0.74
Sucrose, 40% sugar syrup	L	1.18	0.66
Sugar, cane & beet	**S**	**1.66**	**0.30**
Sulfur	S	2.00	0.203
Sulfuric acid, 110% (fuming)	L		0.27
Sulfuric acid, 98%	**L**	**1.84**	**0.35**
Sulfuric acid, 60%	L	1.50	0.52
Sulfuric acid, 20%	L	1.14	0.84
Titanium (commercial)	**S**	**4.50**	**0.13**
Toluene	L	0.86	0.42
Trichloroethylene	L	1.62	0.215
Tetrachloride carbon	**L**	**1.58**	**0.21**
Turpentine, spirits of	L	0.86	0.42
Vegetables, fresh, average	S		0.73-0.94
Water	**L**	**1.00**	**1.00**
Wines, table, dessert, average	L	1.03	0.90
Woods, vary from	S	0.35-0.9	0.90
Wool	**S**	**1.32**	**0.325**
Zinc	S	7.05	0.095

Table CG-34. Physical Properties of Gases

	sp gr @ 60-70°F	sp ht @ 60°F Btu/lb-F°
Air	1.00	0.24
Ammonia	0.60	0.54
Benzene		**0.325**
Butane	2.00	0.455
Carbon dioxide	1.50	0.21
Carbon monoxide	**0.97**	**0.255**
Chlorine	2.50	0.118
Ethane	1.10	0.50
Ethylene	**0.97**	**0.45**
Freon - 12		0.16
Hydrogen	0.069	3.42
Hydrogen sulfide	**1.20**	**0.25**
Methane	0.55	0.60
Nitrogen	0.97	0.253
Oxygen	**1.10**	**0.225**
Propane	1.50	0.46
Sulfur dioxide		0.162
Water vapor (steam)	2.30	0.453

Armstrong Steam and Condensate Group, 816 Maple St., P.O. Box 408, Three Rivers, MI 49093 – USA Phone: (269) 273-1415 Fax: (269) 278-6555
www.armstrong-intl.com
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