

Table: **Basic Physical Properties of Common Solvents**

No.	material or substance name	molecular formula	mol. weight	CAS Registry No.	UN No.	RTECS No.	state	color	odor	boiling point (°C)
151	Dimethyl phthalate	C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	194.2	131-11-3		T11575000	Liquid	colorless	aromatic	284
152	Dimethyl sulfate	C <sub>2</sub> H <sub>6</sub> O <sub>4</sub> S	126.13	77-78-1	1595	WS8225000	Liquid	colorless	odorless	188
153	Dimethyl sulfide	C <sub>2</sub> H <sub>6</sub> S	62.1	75-18-3	1164	PV5075000	Liquid	colorless	characteristic	37
154	Dimethyl sulfoxide	C <sub>2</sub> H <sub>6</sub> OS	78.14	67-68-5		PV6210000	Liquid	colorless	garlic-onion	189
155	N,N-Dimethylacetamide	C <sub>4</sub> H <sub>9</sub> NO	87.12	127-19-5		AB7700000	Liquid	colorless	ammonia - fishy	165
156	Dimethylamine	C <sub>2</sub> H <sub>7</sub> N	45.1	124-40-3		IP8750000	Gas	colorless	ammonia, fishy	6.89
157	N,N-Dimethylaniline	C <sub>8</sub> H <sub>11</sub> N	121.2	121-69-7	2253	BX4725000	Liquid	yellow	characteristic	192
158	Dimethylethanolamine	C <sub>4</sub> H <sub>11</sub> NO	89.16	108-01-0	2051	KK6125000	Liquid	colorless	amine	133
159	N,N-Dimethylformamide	C <sub>3</sub> H <sub>7</sub> NO	73.09	68-12-2	2265	LQ2100000	Liquid	colorless	characteristic	153
160	1,4-Dioxane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	88.12	123-91-1	1165	JG8225000	Liquid	colorless	ether-like	101.32
161	Dipentene	C <sub>10</sub> H <sub>16</sub>	136.26	138-86-3	2052	OS8100000	Liquid			176
162	Diphenyl ether	C <sub>12</sub> H <sub>10</sub> O	170.22	101-84-8	3077	KN8970000	Solid	colorless	geranium-like	258.06
163	Dipropylene glycol (isomer mixture)	C <sub>6</sub> H <sub>13</sub> O <sub>3</sub>	134.2	110-98-5		UB8785000	Liquid	colorless	nearly odorless	233
164	Dipropylene glycol monomethyl ether	C <sub>7</sub> H <sub>16</sub> O <sub>3</sub>	148.2	34590-94-8		JM1575000	Liquid	colorless	ether-like	188.3
165	Dipropylene glycol monomethyl ether acetate	C <sub>9</sub> H <sub>18</sub> O <sub>4</sub>	190.14	88917-22-0		UB7875850	Liquid			200
166	n-Dodecane	C <sub>12</sub> H <sub>26</sub>	170.34	112-40-3			Liquid	colorless	gasoline	216
167	1-Dodecanol	C <sub>12</sub> H <sub>26</sub> O	186.3	112-53-8			Liquid	colorless	aromatic	259
168	Dowanol DPnB	C <sub>10</sub> H <sub>28</sub> O <sub>3</sub>	190.32	29911-28-2			Liquid			
169	Dowanol PnB	C <sub>7</sub> H <sub>17</sub> O <sub>2</sub>	132.23	5131-66-8			Liquid	colorless	mild	170
170	Dowanol PnP	C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>	118.18	1569-01-3			Liquid	colorless	characteristic	150
171	Eastman DP Solvent	C <sub>7</sub> H <sub>16</sub> O <sub>3</sub>	148.2	6881-94-3			Liquid	colorless		202
172	Enanthic acid	C <sub>7</sub> H <sub>14</sub> O <sub>2</sub>	130.2	111-14-8	3265	MJ1575000	Liquid			223
173	Epichlorohydrin	C <sub>3</sub> H <sub>5</sub> ClO	92.53	106-89-8		TX4900000	Liquid	colorless	chloroform-like	114

174	Estasol MD 10			110-42-9			Liquid			177
175	Ethanol (anhydrous)	C <sub>2</sub> H <sub>6</sub> O	46.069	64-17-5	1170	KQ6300000	Liquid	colorless	characteristic	78.39
176	Ethanolamine	C <sub>2</sub> H <sub>7</sub> NO	61.1	141-43-5	2491	KJ5775000	Liquid	colorless	ammonia-like	170.8
177	2-Ethoxyethanol	C <sub>4</sub> H <sub>10</sub> O <sub>2</sub>	90.14	110-80-5	1171	KK8050000	Liquid	colorless	sweet, ether	135.5
178	2-Ethoxyethyl acetate	C <sub>6</sub> H <sub>12</sub> O <sub>3</sub>	132.18	111-15-9	1172	KK8225000	Liquid	colorless	mild	156.1
179	Ethyl acetate	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	88.12	141-78-6	1173	AH5425000	Liquid	colorless	ether, fruity	77.06
180	Ethyl acetoacetate	C <sub>6</sub> H <sub>10</sub> O <sub>3</sub>	130.14	141-97-9		AK5250000	Liquid	colorless	fruity	180.8
181	Ethyl acrylate	C <sub>5</sub> H <sub>8</sub> O <sub>2</sub>	100.1	140-88-5	1917	AT0700000	Liquid	colorless	acidic	99
182	Ethyl chloroacetate	C <sub>4</sub> H <sub>7</sub> ClO <sub>2</sub>	122.5	105-39-5	1181		Liquid	colorless	fruity, pungent	144
183	Ethyl chloroformate	C <sub>3</sub> H <sub>5</sub> ClO <sub>2</sub>	108.53	541-41-3	1182	LQ6125000	Liquid	colorless	pungent	95
184	Ethyl-3-ethoxypropionate	C <sub>7</sub> H <sub>14</sub> O <sub>3</sub>	146.19	763-69-9			Liquid	colorless		165
185	Ethylamine	C <sub>2</sub> H <sub>7</sub> N	45.1	75-04-7	1036	KH2100000	Gas	colorless	pungent	16.6
186	n-Hexane	C <sub>6</sub> H <sub>14</sub>	86.2	110-54-3	1208	MN9275000	Liquid	colorless	gasoline-like	68.7
187	1,6-Hexanediol	C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>	118.2	629-11-8		MO2100000	Solid	white		250
188	1-Hexanol	C <sub>6</sub> H <sub>14</sub> O	102.2	111-27-3	2282	MQ4025000	Liquid	colorless	fatty, fruity	157
189	1-Hexene	C <sub>6</sub> H <sub>12</sub>	84.2	592-41-6	2370		Liquid	colorless	characteristic	63
190	Hexylene glycol	C <sub>6</sub> H <sub>14</sub> O <sub>2</sub>	118.2	107-41-5		SA0810000	Liquid	colorless	characteristic	196
191	Hydroquinone	C <sub>6</sub> H <sub>6</sub> O <sub>2</sub>	110.11	123-31-9	2662	MX3500000	Solid	colorless		285
192	Ethylbenzene	C <sub>8</sub> H <sub>10</sub>	106.18	100-41-4	1175	DA0700000	Liquid	colorless	aromatic	136.19
193	Ethylene carbonate	C <sub>3</sub> H <sub>4</sub> O <sub>3</sub>	88.07	96-49-1			Solid	colorless	odorless	248
194	Ethylene glycol	C <sub>2</sub> H <sub>6</sub> O <sub>2</sub>	62.08	107-21-1		KW2975000	Liquid	colorless	none	197.54
195	Ethylene glycol diacetate	C <sub>6</sub> H <sub>10</sub> O <sub>4</sub>	146.15	111-55-7			Liquid	colorless	esterlike	191
196	Ethylene glycol hexyl ether	C <sub>8</sub> H <sub>18</sub> O <sub>2</sub>	146.26	112-25-4			Liquid	colorless		208
197	Ethylene glycol monobutyl ether acetate	C <sub>8</sub> H <sub>16</sub> O <sub>3</sub>	160.24	112-07-2		KJ8925000	Liquid	colorless	Fruity	192
198	Ethylene glycol monophenyl ether	C <sub>8</sub> H <sub>10</sub> O <sub>2</sub>	138.18	122-99-6		KM0350000	Liquid	colorless	rose-like	245.2
199	Ethylene glycol monopropyl ether	C <sub>5</sub> H <sub>12</sub> O <sub>2</sub>	104.15	2807-30-9		KM2800000	Liquid	colorless		149.5
200	Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O	44.06	75-21-8	1040	KX2450000	Gas	colorless	ether-like	10.7

No.	freezing point (°C)	density (g/cm <sup>3</sup> )	specific heat (cal/(mol K))	thermal cond. (cal/(cm s K))	heat of vaporization (cal/g)	Hildebrand sol. param. (cal <sup>1/2</sup> cm <sup>-3/2</sup> )
151	5.5	1.19 [25°C]				9.34
152	-32	1.33 [15°C]				10.85
153	-98	0.85 [21°C]				8.88
154	18.54	1.095 [25°C]	36.61		12.64 [25°C]	12
155	-20	0.936 [25°C]	42.3	0.000416	11.75 [25°C]	10.8
156	-92.2	0.649 [25°C]	32.9		5.65 [25°C]	
157	2.5	0.96 [20°C]				9.26
158	-40	0.89 [20°C]				
159	-61	0.95 [23°C]				11.57
160	11.8	1.028 [25°C]	36.01		8.5	10.13
161	-95.5	0.86 [20°C]				
162	26.87	1.066 [30°C]	51.76		15.99 [25°C]	10.1
163		1.03 [20°C]				
164	-80	0.95 [4°C]				
165		0.97 [4°C]				
166	-9.6	0.753 [25°C]				7.68
167	26	0.831 [25°C]				9.89
168						
169	-148	0.884				
170	-112	0.886				
171	-90	0.963				
172	-7.5	0.9 [20°C]				10.8
173	-48	1.18 [25°C]				
174	-18	0.87				
175	-114.15	0.794 [15°C]			9.54	12.92
176	10.3	1.013 [25°C]	30.4		11.91	15.5
177	-100	0.925 [25°C]	50.38		11.52 [25°C]	9.9
178	-61.7	0.967 [25°C]			12.59 [25°C]	8.7
179	-83.6	0.895 [25°C]	40.1		8.51 [25°C]	9.1
180	-45	1.021 [20°C]				9.65
181	-71	0.92				
182	-26	1.159 [20°C]				10.56
183	-80.6	1.14 [15°C]				

184	-50	0.949 [20°C]				
185	-81	0.7 [15°C]			6.53	9.53
186	-95.3	0.655 [25°C]	46.72		7.54 [25°C]	7.27
187	42	0.96 [0°C]				
188	-44.6	0.815 [25°C]	57.68		14.78 [25°C]	10.7
189	-140	0.673 [20°C]				
190	-50	0.92 [20°C]	62.05			11.3
191	173.5	1.33 [20°C]				
192	-94.975	0.863 [25°C]	44.35		10.098 [25°C]	8.79
193	36	1.322 [40°C]				12.43
194	-12.6	1.11 [25°C]	36.1		16.2 [25°C]	14.2
195	-31	1.128 [0°C]				
196	-14	0.887 [25°C]				
197	-64	0.94 [20°C]				8.4
198	14	1.11 [20°C]	71.86		12.46	
199	-90	0.91 [15°C]				
200	-111	0.68 [10°C]			5.995	

No.	surface tension (mN/m)	water solubility (mg/kg)	viscosity (cP)	dielec. const.	electrical conductivity (pS/m)	refractive index	Henry's law const. (atm m <sup>3</sup> /mol)
151		4300	14.36 [25°C]			1.514	0.000000182
152	40.1	28000	1.76 [25°C]			1.386	0.0000039
153	26.5	6000	0.28 [25°C]			1.432	0.002
154	42.98	infinite	1.991 [25°C]	46.45		1.477	0.000000496
155	32.43	infinite	0.927 [25°C]	37.78		1.438	0.000000539
156	16.33	1630000	0.186 [25°C]	5.26		1.357	0.0000177
157		1100	1.29 [25°C]			1.556	0.000102
158	28.3	infinite	4.08 [25°C]			1.429	0.0000000173
159		miscible	0.802 [25°C]			1.428	
160	32.8	infinite	1.087 [30°C]	2.209		1.42	0.0000048
161		13.8		2.3		1.467	0.38
162	38.82	20	2.6 [25°C]	3.87		1.576	0.000118
163		miscible	116 [20°C]			1.439	
164	28.8	infinite	4 [25°C]			1.422	0.0000000466
165	28.6		2 [25°C]				0.000000746
166		0.0037	1.378 [25°C]			1.42	8.21
167		4	15.72 [25°C]			1.441	0.000052
168							
169						1.407	
170						1.412	
171		miscible				1.429	
172		3000	3.84 [25°C]			1.421	0.000000388
173			1.1 [25°C]			1.438	
174							
175	21.99	infinite	1.263 [20°C]			1.362	0.0000052
176	48.89	miscible	19.37 [25°C]	37.72		1.452	0.00000004
177	28.2	infinite	1.85 [25°C]	29.6		1.406	0.000000123
178	31.8	230000	1.025 [25°C]	7.57		1.403	0.00000362
179	23.75	80000	0.426 [25°C]	6.02		1.37	0.000138
180		28600	1.51 [25°C]			1.418	0.00000109
181	0.025	15000				1.406	
182			1.11 [25°C]			1.421	
183	27.5	decomposes	0.56 [25°C]			1.394	

184		380	1.18 [25°C]			1.407	0.00065
185	19.58	miscible	0.25 [25°C]			1.363	0.0000123
186	17.94	13	0.294 [25°C]	1.88		1.375	0.000343
187		miscible					
188	25.73	5900	4.592 [25°C]	13.3		1.416	0.0000211
189		70	0.283 [25°C]			1.384	0.295
190	33.1	miscible	38.9 [20°C]	7.7	3000000	1.428	
191		70000					0.0000000000384
192	28.48	169	0.6373 [25°C]	2.042		1.493	0.00843
193		soluble	1.93 [25°C]			1.416	
194	48.49	infinite	21 [20°C]	37.7		1.431	0.00000006
195	20	164000	2.9 [20°C]			1.416	0.000000106
196						1.429	
197	27.4	17000	1.7 [25°C]			1.413	0.00000638
198	42	traces	20.32 [25°C]			1.534	0.0000000155
199		very good	3.03 [25°C]			1.413	
200	24.3	infinite	0.3 [0°C]	13		1.359	0.000148

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No.	vapor density	vapor pressure (kPa)
151	6.69	0.0004 [25°C]
152	4.35	0.065 [20°C]
153	2.14	6.47 [25°C]
154	2.69	0.08133 [25°C]
155	3	0.173 [25°C]
156	1.6	202.66 [25°C]
157	4.2	0.067 [20°C]
158	3.1	0.06 [20°C]
159	2.51	0.492 [25°C]
160	3	5.08 [25°C]
161	4.7	2.666 [68°C]
162	5.87	0.03 [25°C]
163	4.63	0.004 [25°C]
164	5.11	0.0733 [25°C]
165	6	0.6893 [22°C]
166		0.0154 [25°C]
167		0.0001 [25°C]
168		
169		
170		
171		0.004 [20°C]
172		0.1333 [78°C]
173	3.2	1.84
174		0.133 [22°C]
175	1.59	5.9466 [20°C]
176	2.1	0.053 [20°C]
177	3.11	0.71 [25°C]
178	4.56	0.31 [25°C]
179	3	12.49 [25°C]
180	4.48	0.1 [20°C]
181	3.45	3.9 [20°C]
182	4.3	0.673 [25°C]
183	3.74	5.5 [20°C]

184	5.03	
185	1.55	0.1333 [25°C]
186	3	20.17 [25°C]
187	4.1	
188	3.5	0.11 [25°C]
189	2.9	41 [38°C]
190	4.1	0.003 [20°C]
191	3.8	0.000001 [20°C]
192	3.7	1.28 [25°C]
193	3.04	0.0013 [20°C]
194	2.14	0.01 [25°C]
195	5.04	0.27 [20°C]
196	5.04	
197	5.53	0.03 [20°C]
198	4.76	0.004 [20°C]
199	3.6	0.2 [20°C]
200	1.52	174.666 [25°C]