HUNTSMAN

Comparative Solvents Data

JEFFSOL® Alkylene Carbonates

In this brochure, you will find data on more than 270 solvents, including several produced by Huntsman Corporation. The solvents are listed in alphabetical order for easy reference, with Huntsman Corporation products printed in red.

Solvents examined in this study include JEFFSOL® Ethylene Carbonate (EC), JEFFSOL® Propylene Carbonate (PC), JEFFSOL® EC-25, EC-50, and EC-75 (blends of ethylene and propylene carbonate), and JEFFSOL® Butylene Carbonate (BC). All these alkylene carbonates are cyclic organic esters manufactured by Huntsman Corporation. They are excellent solvents for many organic and inorganic materials. Their solvent properties, high flash points, and low toxicity make them particularly attractive choices for many solvent applications today.

If you'd like further information about any of these high-quality Huntsman products, or their many applications, just let us know. We want to earn the opportunity to be your supplier of choice.

QUALITY POLICY

Huntsman Corporation is committed to providing products and services that consistently conform to our customers' requirements.

To fulfill this commitment, the employees of Huntsman Corporation are dedicated to "being the best."

In implementing its quality policy, Huntsman Corporation is committed to the use of satistical methods.

Our dedication to quality is demonstrated by the large number of Huntsman Corporation facilities meeting the requirements of the ISO-9000 international quality standard.

PRODUCT SAFETY POLICY

It is the product safety policy of Huntsman Corporation to provide our customers with information on the safe handling and use of our products. The Material Safety Data Sheet (MSDS) should always be read and understood thoroughly before handling the product, and adequate safety procedures should be followed. Information on the toxicity, environmental, and industrial hygiene aspects of our products may be found in the MSDS.

Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
Acetic Acid	60.05	1.045	104	116-118	1.34	HC	1.15	27.09	S	57.5	10.5	7.1	3.9	6.6	64-19-7
Acetone	58.08	0.787	0	56	6.06	HC	0.31	22.86	M	74.0	9.8	7.6	5.1	3.4	67-64-1
Acetonitrile	41.05	0.782	42	82	2.33	HC	0.34	28.92	P	52.9	11.9	7.5	8.8	3.0	75-05-8
Acetophenone	120.15	1.026	180	202	0.032	HC	1.62	38.87	M	117.1	10.6	9.6	4.2	1.8	98-86-2
Acrylonitrile	53.06	0.802	32	77	3.31	HC	0.33	26.67	P	66.2	12.1	8.0	8.5	3.3	107-13-1
Allyl alcohol	58.08	0.850	72	96-98	1.00	HC	1.26	25.52	S	68.3	12.6	7.9	5.3	8.2	107-18-6
N-(2-Aminoethyl)piperazine	129.21	0.980	200	218-222	0.007	HC	11.80	42.68	S	131.8	10.5	7.6	5.7	4.4	140-31-8
n-Amyl acetate	130.18	0.872	75	142	0.40	EA	0.86	25.07	M	150.7	9.0	7.9	1.0	4.2	628-63-7
t-Amyl alcohol (2-methyl-2-butanol)	88.15	0.801	70	102	0.93	AS	3.66	22.30	S	109.2	10.3	6.7	4.9	6.1	75-85-4
Aniline	93.13	1.018	158	184	0.048	HC	3.75	41.95	S	91.5	11.1	9.5	2.5	5.1	62-53-3
Anisole (methoxybenzene)	108.14	0.991	125	154	0.322	HC	1.01	34.47	M	109.1	13.0	8.7	2.0	9.5	100-66-3
Benzene	78.11	0.870	12	80	3.50	AS	0.61	28.21	P	89.4	9.1	9.0	0.0	1.0	71-43-2
Benzonitrile	103.12	1.006	161	188	0.065	HC	1.24	39.02	P	102.5	9.7	8.5	4.4	1.6	100-47-0
Benzyl alcohol	108.14	1.041	213	205	0.007	HC	5.43	38.60	S	103.9	11.6	9.0	3.1	6.7	100-51-6
Biphenyl (mp 69-72°C)	154.21	0.989	235	255	NA[a]	—	0.95[b]	32.20[b]	P	155.9	10.6	10.5	0.5	1.0	92-52-4
BM (1-methoxy-2-butanol)	104.15	0.909	104	135	0.384	HC	1.97	26.53	M	114.6	11.0	8.1	2.7	6.9	3085-35-6
iso-Butyl acetate	116.16	0.864	71	115-117	1.50	AS	0.67	23.20	M	133.5	8.2	7.4	1.8	3.1	110-19-0
n-Butyl acetate	116.16	0.878	72	124-126	1.00	AS	0.68	24.81	M	132.5	8.5	7.7	1.8	3.1	123-86-4
iso-Butyl alcohol	74.12	0.799	99	108	0.64	AS	3.42	22.40	S	92.8	11.1	7.4	2.8	7.8	78-83-1
n-Butyl alcohol	74.12	0.806	95	117-118	0.44	AS	2.62	23.35	S	91.5	11.3	7.8	2.8	7.7	71-36-3
sec-Butyl alcohol	74.12	0.804	80	98	0.897	HC	2.93	22.45	S	92.0	10.8	7.7	2.8	7.1	15892-23-6
t-Butyl alcohol (mp 25°C)	74.12	0.782	40	83	0.95	HC	3.35	20.05	S	94.8	11.1	7.4	2.8	7.4	75-65-0
n-Butylamine	73.14	0.737	6	78	3.59	HC	0.47	23.96	S	99.2	9.1	7.9	2.2	3.9	109-73-9
n-Butyl benzyl phthalate	312.37	1.096	390	370	<0.001	HC	44.30	40.17	M	285.0	10.9	9.3	5.5	1.5	85-68-7
iso-Butyl iso-butyrate	144.22	0.851	99	147-148	0.48	AS	0.84	22.30	M	166.0	8.1	7.4	1.4	2.9	97-85-8
1,2-Butylene carbonate (JEFFSOL® BC)	**116.12**	**1.141**	**275**	**251**	**<0.005**	**HC**	**3.15**	**38.1**	**M**	**101.8**	**12.1**	**8.3**	**3.0**	**4.8**	**4437-85-8**
iso-Butyl heptyl ketone	184.32	0.817	189	213-224	0.01	UC	1.73	25.10	M	224.6	8.0	7.2	2.9	1.8	19594-40-2
n-Butyl lactate	146.19	0.980	157	185-187	0.036	HC	3.22	28.00	S	149.2	9.7	7.7	3.2	5.0	138-22-7
n-Butyl stearate	340.59	0.857	320	350	<0.005	HC	8.26	33.20	M	397.4	7.5	7.1	1.8	1.7	123-95-5
gamma-Butyrolactone	86.09	1.117	209	204-205	0.030	HC	1.73	40.43	M	77.1	12.8	9.3	8.1	3.6	96-48-0

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See page 7 for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See page 7 for the list of references from which these parameters were obtained.
[a]Not applicable — material is a solid at 25°C. [b]75°C.

Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
Butyronitrile	69.11	0.791	62	115-117	1.16	HC	0.53	26.50	P	87.4	10.0	7.5	6.1	2.5	109-74-0
Carbon disulfide	76.14	1.262	-29	46	10.90	HC	0.34	31.70	P	60.3	10.0	10.0	0.0	0.3	75-15-0
Carbon tetrachloride	153.82	1.588	None	77	7.52	HC	0.90	26.29	P	96.9	8.7	8.7	0.0	0.3	56-23-5
Chlorobenzene	112.56	1.104	75	132	1.15	HC	0.76	32.82	P	102.0	9.6	9.3	2.1	1.0	108-90-7
Chloroform	119.38	1.488	None	61	10.20	HC	0.52	26.69	P	80.2	9.3	8.7	1.5	2.8	67-66-3
Cumene (isopropylbenzene)	120.20	0.860	115	152-154	0.43	HC	0.73	27.43	P	139.8	8.6	7.9	3.4	0.0	98-82-8
Cyclohexane	84.16	0.775	-1	80.7-81	5.60	UN	0.91	24.65	P	108.6	8.2	8.2	0.0	0.1	110-82-7
1,2-Cyclohexane carbonate	142.16	1.188	305	—	NA[a]	—	10.60[c]	33.44[c]	M	119.7	10.0	8.6	2.6	4.5	4389-22-4
Cyclohexanol	100.16	0.959	154	160-162	0.05	AS	54.54	33.96	S	106.0	11.0	8.5	2.0	6.6	108-93-0
Cyclohexanone	98.14	0.943	116	155	0.30	AS	2.00	34.05	M	104.0	9.6	8.7	3.1	2.5	108-94-1
N-Cyclohexyl-2-pyrrolidinone	167.25	1.026	>112	284	<0.001	HC	10.40	38.79	M	163.0	8.7	—	—	—	6837-24-7
Cyclohexylamine	99.18	0.863	90	134	0.734	HC	1.87	31.06	S	114.9	9.2	8.5	1.5	3.2	108-91-8
p-Cymene (4-isopropyltoluene)	134.22	0.856	117	176-178	0.14	HC	0.83	28.28	P	156.8	8.1	8.1	0.3	0.0	99-87-6
DB (diethylene glycol butyl ether)	162.23	0.949	232[d]	230-235	0.003	AS	4.92	29.37	M	170.6	10.0	7.8	3.4	5.2	112-34-5
DBA (diethylene glycol butyl ether acetate)	204.27	0.974	240[d]	235-250	0.001	AS	3.02	30.00	M	209.1	11.0	8.1	2.8	6.7	124-17-4
DBE (DuPont)	159	1.085	212	196-225	0.009	HC	2.60	35.02	M	146.5	9.9	8.3	2.3	4.8	53-60-5
DBE-3 (DuPont)	173	1.061	216	215-225	0.004	HC	2.65	35.02	M	163.0	9.7	8.3	2.1	4.5	360-00-3
DBE-4 (DuPont)	146	1.114	200	196	0.026	HC	2.78	35.79	M	131.1	10.0	8.3	2.5	5.0	106-65-0
DBE-5 (DuPont)	160	1.084	225	210-215	0.009	HC	2.71	35.02	M	147.6	9.9	8.3	2.3	4.8	1119-40-0
DE (diethylene glycol ethyl ether)	134.17	0.995	205	202	0.02	AS	3.83	33.50	M	130.9	10.9	7.9	4.5	6.0	111-90-0
DEA (diethylene glycol ethyl ether acetate)	176.21	1.006	225[d]	214-221	0.008	AR	2.67	31.40	M	174.5	11.7	8.2	3.1	7.7	112-15-2
cis-Decalin	138.25	0.888	137	193	0.080	HC	2.99	29.29	P	155.8	9.2	9.2	0.0	0.0	493-01-6
trans-Decalin	138.25	0.866	127	185	0.129	HC	1.93	26.42	P	159.6	8.8	8.8	0.0	0.0	493-02-7
Decalin (mixture of cis and trans isomers)	138.25	0.892	135	189-191	0.10	HC	2.35	30.90	P	155.0	8.8	8.8	0.0	0.0	91-17-8
n-Decane	142.29	0.726	115	174	0.126	HC	0.87	23.37	P	196.0	7.7	7.7	0.0	0.0	124-18-5
1,2-Decane carbonate	200.28	0.982	295	278	<0.001	HC	13.00	31.01	M	204.0	8.8	8.0	1.5	3.4	99260-48-7
1-Decanol (decyl alcohol)	158.29	0.826	180	231	0.001	HC	11.90	28.70	S	191.6	10.0	8.6	1.3	4.9	112-30-1
Diacetone alcohol	116.16	0.927	143	166	0.12	AS	2.76	29.40	M	124.2	10.2	7.7	4.0	5.3	123-42-2
Di-n-butyl phthalate	278.35	1.040	340	340	<0.005	HC	16.32	33.30	M	267.6	9.9	8.7	4.2	2.0	84-74-2
Di-n-butyl sebacate	314.47	0.932	>230	345	<0.005	HC	7.99	32.16	M	337.4	7.4	6.8	2.2	2.0	109-43-3
o-Dichlorobenzene	147.00	1.302	150	179-180	0.165	HC	1.27	37.00	P	112.9	10.0	9.4	3.1	1.6	95-50-1
Dichlorodifluoromethane	120.91	1.310	None	-29.8	NA[e]	—	0.22	9.00	P	92.3	6.1	6.0	1.0	0.0	75-71-8
1,1-Dichloroethane	98.96	1.169	35	57-58	9.14	HC	0.45	24.85	P	84.7	9.0	8.1	4.0	0.2	75-34-3
1,2-Dichloroethane	98.96	1.252	60	83	5.05	HC	0.74	32.07	P	79.4	10.2	9.3	3.6	2.0	107-06-2
1,1-Dichloroethylene	96.94	1.210	-12	31	15.70	HC	0.39	22.89	P	80.1	9.2	8.3	3.3	2.2	75-35-4
1,2-Dichlorotetrafluoroethane (Freon 114)	170.92	1.461	None	3.8	NA[e]	—	0.36	11.44	P	117.0	6.3	6.2	0.9	0.0	76-14-2
Diethanolamine	**105.14**	**1.093**	**280**	**269**	**<0.001**	**HC**	**577.00**	**48.00**	**S**	**96.2**	**13.9**	**8.4**	**3.8**	**10.4**	**111-42-2**
Diethylamine	73.14	0.704	-20	55	6.74	HC	0.32	19.93	S	103.9	8.0	7.3	1.1	3.0	109-89-7
Diethyl carbonate	118.13	0.971	88	126-128	0.97	HC	0.74	26.22	M	121.0	8.8	8.1	1.5	3.0	105-58-8
Diethylene glycol (DEG)	**106.12**	**1.114**	**290**	**245**	**<0.01**	**AS**	**28.55**	**43.15**	**S**	**95.3**	**14.6**	**7.9**	**7.2**	**10.0**	**111-46-6**
Diethylenetriamine	**103.17**	**0.951**	**202**	**199-209**	**0.005**	**HC**	**5.82**	**42.40**	**S**	**108.5**	**12.6**	**8.2**	**6.5**	**7.0**	**111-40-0**
Diethylketone	86.13	0.810	55	102	2.30	AS	0.44	25.09	M	106.4	8.8	7.7	3.7	2.3	96-22-0
Diethyl phthalate	222.24	1.115	320	298-299	<0.005	HC	10.34	37.09	M	199.3	10.0	8.6	4.7	2.2	84-66-2
Diethyl succinate	174.20	1.043	195	217-218	0.009	HC	2.48	32.00	M	167.0	9.3	7.9	2.0	4.5	123-25-1
DIGYLCOLAMINE® agent (DGA®)	**105.14**	**1.053**	**255**	**221**	**0.002**	**HC**	**26.15**	**44.40**	**S**	**99.8**	**12.3**	**5.8**	**5.4**	**9.4**	**929-06-6**
Diglyme (diethylene glycol dimethyl ether)	134.18	0.934	158	162	0.15	HC	1.00	29.17	M	143.7	9.4	7.7	3.0	4.5	111-96-6
Diisobutylcarbinol	144.26	0.806	151	176-182	0.02	UC	10.54	24.52	S	178.0	9.1	7.0	3.8	4.5	108-82-7
Diisobutyl ketone	142.23	0.807	120	163-176	0.176	HC	0.96	24.10	M	177.1	8.2	7.8	1.8	2.0	108-83-8
Diisopropyl naphthalenes, 1,4- and 2,6-isomers	212.34	0.952	302	300	<0.005	HC	10.50	32.30	P	223.0	8.1	8.1	0.2	0.0	24157-79-7 24157-81-1
N,N-Dimethyl acetamide	87.12	0.933	158	164-166	0.138	HC	0.93	33.53	M	92.5	11.1	8.2	5.6	5.0	127-19-5
2,2-Dimethylbutane	86.18	0.643	-30	50	9.08	HC	0.34	14.90	P	134.0	6.7	6.7	0.0	0.0	75-83-2
2,3-Dimethylbutane	86.18	0.656	-28	58	8.12	HC	0.32	17.50	P	131.4	6.9	6.9	0.0	0.0	79--29-8
Dimethyl carbonate	90.08	1.065	65	90.3	3.22	HC	0.58	29.03	M	84.4	9.5	7.7	1.8	5.3	616-38-6
N,N-Dimethylethanolamine	**89.14**	**0.884**	**105**	**133-134**	**0.157**	**HC**	**4.08**	**28.30**	**S**	**100.8**	**10.4**	**6.6**	**4.2**	**6.8**	**108-01-0**
N,N'-Dimethylethyleneurea	114.15	1.040	176	107[f]	0.012	HC	2.06	40.10	M	109.8	10.7	7.2	6.1	5.1	80-73-9
N,N-Dimethylformamide	73.10	0.940	136	153	0.20	EA	0.80	35.20	M	77.0	12.1	8.5	6.7	5.5	68-12-2
Dimethyl phthalate	194.19	1.187	295	282	<0.005	HC	15.23	41.50	M	163.6	10.8	9.1	5.3	2.4	131-11-3

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See page 7 for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See page 7 for the list of references from which these parameters were obtained.
[a]Not applicable — material is a solid at 25°C. [c]40°C. [d]COC. [e]Not applicable — material is a gas at 25°C.

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Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
Dimethyl sulfoxide	78.13	1.097	203	189	0.026	HC	2.03	42.78	M	71.2	13.0	9.0	8.0	5.0	67-68-5
Dioctyl phthalate	390.56	0.977	405	384	<0.005	HC	56.80	31.60	M	399.8	8.9	8.1	3.4	1.5	117-81-7
1,4-Dioxane (p-dioxane)	88.11	1.030	54	100-102	2.17	HC	1.19	32.87	M	85.5	10.0	9.3	0.9	3.6	123-91-I
Di-n-propylamine	101.19	0.735	39	105-110	1.99	HC	0.51	21.90	S	137.7	7.8	7.5	0.7	2.0	142-84-7
Di-n-propyl carbonate	146.19	0.940	147	165-167	0.150	HC	1.25	26.23	M	155.5	8.8	7.6	2.0	3.9	623-96-1
Dipropylene glycol (DPG)	**134.18**	**1.020**	**280**	**231-232**	**<0.01**	**AS**	**77.80**	**32.75**	**S**	**131.6**	**15.5**	**7.8**	**9.9**	**9.0**	**25265-71-8**
DM (diethylene glycol methyl ether)	120.15	1.006	183	194	0.018	HC	3.42	30.90	M	118.0	10.7	7.9	3.8	6.2	111-77-3
DMI (1,2-dimethyl imidazole)	96.13	1.080	198	204	NA[g]	—	1.59[h]	38.60[h]	M	89.0	11.7	8.5	6.2	5.2	1739-84-0
1,2-Dodecane carbonate	228.34	0.963	310	285	<0.001	HC	19.90	32.78	M	237.1	8.7	8.0	1.3	3.2	—
DP (diethylene glycol propyl ether)	148.20	0.957	200	202-216	0.01	EA	—	—	M	154.1	12.4	9.1	2.6	8.0	6881-94-3
DPB (dipropylene glycol butyl ether)	190.29	0.911	230	228	0.004	HC	4.35	28.04	M	208.9	9.9	7.0	3.9	5.8	29911-28-2
DPM (dipropylene glycol methyl ether)	148.20	0.949	167	182-193	0.02	EA	3.44	28.25	M	155.8	12.0	8.8	2.6	7.7	34590-94-8
DPMA (dipropylene glycol methyl ether acetate)	190.24	0.969	186	193-205	<0.01	AR	2.12	28.45	M	195.7	8.6	7.4	1.9	4.0	88917-22-0
EB (ethylene glycol butyl ether)	118.18	0.899	140	169-173	0.072	HC	2.95	26.92	M	131.6	10.2	7.8	2.5	6.0	111-76-2
EBA (ethylene glycol butyl ether acetate)	160.21	0.938	169	192	0.03	EA	1.70	27.40	M	170.4	10.3	8.6	3.0	4.9	112-07-2
EC-25 (JEFFSOL® EC-25, 25/75 wt. % EC/PC)	**98.18**	**1.232**	**285-290**	**243-244**	**<0.005**	**HC**	**2.52**	**43.2**	**M**	**80.3**	**13.5**	**9.7**	**9.2**	**2.1**	**96-49-1 108-32-7**
EC-50 (JEFFSOL® EC-50, 50/50 wt. % EC/PC)	**94.56**	**1.266**	**295-300**	**244-245**	**<0.005**	**HC**	**2.52**	**45.9**	**M**	**74.6**	**13.9**	**9.6**	**9.8**	**2.2**	**96-49-1 108-32-7**
EC-75 (JEFFSOL® EC-75, 75/25 wt. % EC/PC)	**91.19**	**1.302**	**305-310**	**246-247**	**<0.005**	**HC**	**2.55**	**48.5**	**M**	**70.6**	**14.0**	**9.5**	**10.1**	**2.3**	**96-49-1 108-32-7**
EE (ethylene glycol ethyl ether)	90.12	0.926	112	135	0.39	AS	1.85	29.40	M	97.8	11.5	7.9	4.5	7.0	110-80-5
EEA (ethylene glycol ethyl ether acetate)	132.16	0.971	135	156	0.19	AS	1.20	28.00	M	136.2	9.6	7.8	2.3	5.2	111-15-9
EEH (ethylene glycol 2-ethylhexyl ether)	174.29	0.886	208	224-275	0.003	HC	6.35	27.61	M	195.6	11.6	9.4	1.8	6.5	1559-35-9
EEP (ethyl-3-ethoxypropionate)	146.19	0.944	136	165-172	0.120	HC	1.19	27.50	M	153.9	10.2	7.9	4.5	4.6	763-69-9
EG (ethylene glycol)	**62.07**	**1.109**	**230**	**196-198**	**0.01**	**AS**	**17.13**	**47.99**	**S**	**55.8**	**16.1**	**8.3**	**5.4**	**12.7**	**107-21-1**
EG diacetate (ethylene glycol diacetate)	146.15	1.124	181	186-187	0.02	EA	2.65	34.10	M	132.2	11.4	8.0	5.1	6.3	111-55-7
EG dibutyrate (ethylene glycol dibutyrate)	202.25	0.995	270	242-243	<0.005	HC	2.88	29.27	M	203.2	9.0	7.8	1.7	4.1	105-72-6
EH (ethylene glycol hexyl ether)	146.23	0.883	179	200-215	0.01	HC	4.41	27.70	M	164.8	11.7	9.0	2.4	7.2	112-25-4
n-Eicosane (mp 36-38°C)	282.56	—	>230	220[j]	<0.005	HC	5.77[k]	28.53[k]	P	359.8	8.1	8.1	0.0	0.0	112-95-8
EM (ethylene glycol methyl ether)	76.10	0.961	115	124-125	0.53	AS	1.57	30.84	M	79.1	12.1	7.9	4.5	8.0	109-86-4
EMA (ethylene glycol methyl ether acetate)	118.14	1.005	111	145	0.353	HC	1.06	34.00	M	122.6	9.9	7.2	4.8	4.4	110-49-6
EP (ethylene gycol propyl ether)	104.15	0.907	120	149-154	0.191	HC	2.38	29.28	M	114.4	12.1	8.5	3.9	7.8	2807-30-9
Ethanolamine (MEA)	**61.08**	**1.008**	**200**	**170**	**0.015**	**HC**	**19.33**	**48.16**	**S**	**60.6**	**15.4**	**8.4**	**7.6**	**10.4**	**141-43-5**
Ethyl acetate (99+%)	88.11	0.898	26	76-78	4.94	HC	0.43	23.70	M	98.5	8.9	7.7	2.6	3.5	141-78-6
Ethyl alcohol (100%)	46.07	0.782	48	78.4	1.70	AS	1.10	22.18	S	58.5	13.0	7.7	4.3	9.5	64-17-5
Ethyl n-amyl ketone	128.22	0.818	115	167-168	0.27	AS	0.97	26.34	M	156.8	8.4	7.1	3.5	2.8	106-68-3
Ethyl benzene	106.16	0.863	72	136	0.84	AS	0.64	28.61	P	123.1	8.7	8.7	0.3	0.7	100-41-4
2-Ethyl-1-butanol	102.18	0.827	137	146	0.107	HC	5.90	24.98	S	123.2	10.4	7.7	2.1	6.6	97-95-0
Ethyl n-butyl ketone	114.19	0.814	106	146-149	0.44	AS	0.69	25.70	M	139.9	8.5	6.9	3.6	3.4	106-35-4
Ethyl caprate (ethyl decanoate)	200.32	0.858	216	245	0.002	HC	2.09	27.60	M	233.5	8.2	7.7	1.0	2.7	100-38-3
Ethyl caproate (ethyl hexanoate)	144.21	0.869	121	168	0.156	HC	0.90	25.66	M	165.9	8.4	7.6	1.4	3.2	123-66-0
Ethyl caprylate (ethyl octanoate)	172.27	0.874	167	206-208	0.020	HC	1.44	26.06	M	197.1	8.3	7.7	1.2	2.9	106-32-1
Ethyl cinnamate	176.22	1.046	>230	271	<0.001	HC	6.72	37.60	M	168.5	10.0	9.0	4.0	2.0	103-36-3
Ethylene carbonate (JEFFSOL® EC) (mp 37°C)	**88.06**	**1.338[k]**	**320[i]**	**248**	**<0.005**	**HC**	**2.56[k]**	**44.0[k]**	**M**	**66.9**	**14.5**	**9.5**	**10.6**	**2.5**	**96-49-I**
Ethylenediamine	60.10	0.895	105	118	0.91	UC	1.75	41.49	S	67.2	12.4	8.1	4.3	8.3	107-15-3
Ethyl ether	74.12	0.709	-20	34-35	11.80	AS	0.22	16.46	M	104.8	7.7	7.1	1.4	2.5	60-29-7
Ethyl formate	74.08	0.914	-3	52-54	6.93	HC	0.41	23.29	M	81.0	9.1	7.6	3.5	3.7	109-94-4
2-Ethyl-1-hexanol	130.23	0.829	171	183-186	0.02	AS	7.62	27.15	S	157.0	9.9	7.8	1.6	5.8	104-76-7
2-Ethylhexyl acetate	172.27	0.867	160	199-205	0.03	EA	1.41	26.30	M	198.1	10.2	7.9	2.9	5.9	103-09-3
Ethyl lactate (S)-(-)	118.14	1.038	120	154	0.214	HC	2.41	28.57	M	115.0	10.6	7.8	3.7	6.1	687-47-8
N-Ethylmorpholine	**115.8**	**0.901**	**82**	**139**	**0.74**	**HC**	**1.08**	**27.98**	**S**	**127.8**	**8.9**	**8.1**	**3.7**	**0.3**	**100-74-3**
Exxate 500 (Exxon's hexyl acetates)	144.00	0.870	134	164-176	0.17	EX	1.04	24.40	M	165.5	8.3	7.1	3.4	2.6	88230-35-7
Exxate 700 (Exxon's heptyl acetates	158.00	0.870	150	176-200	0.08	EX	1.24	25.40	M	181.6	8.2	7.1	3.3	2.3	90438-79-2
Exxate 800 (Exxon's octyl acetates)	172.00	0.871	171	186-215	0.03	EX	1.74	25.40	M	197.5	8.1	7.2	3.2	2.0	108419-32-5

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See page 7 for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See page 7 for the list of references from which these parameters were obtained.
[f]7 mm Hg. [g]Not applicable — material is a solid at 25°C. [h]40°C (density at 40°C is 0.992 g/ml). [i]PMCC. [j]30 mm Hg. [k]Supercooled.

Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
Exxate 900 (Exxon's nonyl acetates)	186.00	0.869	194	205-235	0.01	EX	2.22	26.40	M	214.0	8.1	7.2	2.9	1.8	—
Exxate1000 (Exxon's decyl acetates)	200.00	0.869	212	220-250	0.006	EX	2.60	26.90	M	230.1	8.0	7.3	2.8	1.5	—
Exxate 1300 (Exxon's tridecyl acetates)	242.00	0.875	261	240-285	0.001	EX	4.63	27.40	M	276.6	7.9	7.4	2.5	0.8	—
Formamide	45.04	1.330	310	193	0.004	HC	1.38	57.57	S	33.9	17.9	8.4	12.8	9.3	75-12-7
Formic acid	46.03	1.216	1.56	100-101	1.14	HC	1.61	38.21	S	37.8	12.2	7.0	5.8	8.1	64-18-6
N-Formyl morpholine	115.13	1.141	230	236-237	<0.003	HC	7.95	46.50	M	101.0	11.0	8.1	5.7	4.9	4394-85-8
Furan	68.08	0.933	-32	32	9.95	HC	0.36	23.85	M	73.0	9.1	8.7	0.9	2.6	110-00-9
Furfural	96.09	1.156	165	162	—	—	—	—	M	83.1	11.9	9.1	7.3	2.5	98-01-1
Furfuryl alcohol	98.10	1.131	149	170	0.04	HC	4.76	38.45	S	86.7	11.9	8.5	3.7	7.4	98-00-0
Glyme (ethylene glycol dimethyl ether)	90.12	0.863	32	85	4.02	HC	0.42	24.60	M	104.4	8.4	7.4	1.3	3.7	110-71-4
Heptane	100.21	0.680	30	98	3.18	HC	0.39	20.16	P	147.4	7.5	7.5	0.0	0.0	142-82-5
n-Hexadecane (mp 18°C)	226.45	0.769	275	287	<0.005	HC	2.98	27.22	P	294.5	8.0	8.0	0.0	0.0	544-76-3
Hexamethylphosphoramide	179.20	1.026	284	255	0.005	HC	3.21	32.38	S	174.7	13.2	11.3	4.2	5.5	680-31-9
n-Hexane	86.18	0.655	-10	69	6.82	HC	0.31	18.30	P	131.6	7.3	7.3	0.0	0.0	110-54-3
1,2-Hexane carbonate	144.17	1.057	305	257	<0.001	HC	4.88	34.19	M	136.4	9.4	8.1	2.3	4.2	66675-43-2
Hexanol (2-methyl-1-pentanol)	102.18	0.820	123	148	0.096	HC	5.49	25.04	S	124.6	10.2	6.9	4.2	6.2	105-30-6
Hexyl acetate (2-methyl-1-pentyl acetate)	144.22	0.867	120	162	0.208	HC	0.91	25.00	M	166.3	8.6	7.3	3.4	3.1	7789-99-3
Hexylene glycol (2-methyl-2,4-pentanediol)	118.18	0.921	201	197	0.01	AS	28.30	32.33	S	128.1	12.3	7.7	4.1	8.7	107-41-5
N-(2-Hydroxyethyl-2-pyrrolidinone)	129.16	1.139	>212	295	<0.001	HC	58.40	48.88	S	113.4	11.7	—	—	—	3445-11-2
IMI (1-isopropyl-2-methyl imidazole)	124.19	0.950	220	217	0.011	HC	2.84	36.19	M	130.7	9.7	7.6	4.2	4.3	84606-45-1
IO (3-isopropyl-2-oxazolidinone)	129.16	1.068	—	151[l]	<0.003	HC	3.73	37.93	M	121.0	10.4	8.3	3.8	4.9	40482-44-8
Isophorone	138.20	0.919	184	213-214	0.02	AS	2.39	31.70	M	150.5	9.7	8.1	4.0	3.6	78-59-1
JEFFSOL® BC (1,2-butylene carbonate)	**116.12**	**1.141**	**275**	**251**	**<0.005**	**HC**	**3.15**	**38.1**	**M**	**101.8**	**12.1**	**8.3**	**3.0**	**4.8**	**4437-85-8**
JEFFSOL® EC (ethylene carbonate – mp 37°C)	**88.06**	**1.338[k]**	**320[l]**	**248**	**<0.005**	**HC**	**2.56[k]**	**44.0[k]**	**M**	**66.9**	**14.5**	**9.5**	**10.6**	**2.5**	**96-49-I**
JEFFSOL® EC-25 (25/75 wt. % EC/PC)	**98.18**	**1.232**	**285-290**	**243-244**	**<0.005**	**HC**	**2.52**	**43.2**	**M**	**80.3**	**13.5**	**9.7**	**9.2**	**2.1**	**96-49-1 108-32-7**
JEFFSOL® EC-50 (50/50 wt. % EC/PC)	**94.56**	**1.266**	**295-300**	**244-245**	**<0.005**	**HC**	**2.52**	**45.9**	**M**	**74.6**	**13.9**	**9.6**	**9.8**	**2.2**	**96-49-1 108-32-7**
JEFFSOL® EC-75 (75/25 wt. % EC/PC)	**91.19**	**1.302**	**305-310**	**246-247**	**<0.005**	**HC**	**2.55**	**48.5**	**M**	**70.6**	**14.0**	**9.5**	**10.1**	**2.3**	**96-49-1 108-32-7**
JEFFSOL® PC (propylene carbonate)	**102.09**	**1.200**	**275[t]**	**242**	**<0.005**	**HC**	**2.50**	**40.9**	**M**	**85.0**	**13.3**	**9.8**	**8.8**	**2.0**	**108-32-7**
D-Limonene	136.24	0.837	1l9	176	0.25	HC	0.83	27.80	P	162.8	8.0	8.0	0.1	0.1	5989-27-5
Mesitylene	120.20	0.860	112	162-164	0.224	HC	0.71	28.45	P	139.8	8.8	8.8	0.0	0.3	108-67-8
Mesityl oxide (4-methyl-3-penten-2-one)	98.15	0.854	87	129	0.828	HC	0.58	28.09	M	115.6	9.2	8.0	3.5	3.0	141-79-7
Methanol	32.07	0.787	52	64.6	2.10	AS	0.56	22.05	S	40.7	14.5	7.4	6.0	10.9	67-56-1
Methoxyisopropyl acetamide	131.18	0.981	265[l]	232	—	—	30.69	33.50	M	133.8	11.4	9.6	4.3	4.2	127727-20-2
Methoxyisopropyl formamide	117.15	1.004	275[l]	231	—	—	8.34	28.10	M	116.6	11.1	8.8	4.9	4.6	73579-09-6
Methoxypropyl acetamide	131.18	0.989	310[l]	256	—	—	15.12	35.50	M	132.7	11.2	9.4	4.3	4.3	16339-54-1
3-Methoxypropylamine	**89.14**	**0.870**	**73**	**117-118[m]**	**—**	**—**	**—**	**—**	**S**	**102.5**	**9.5**	**7.7**	**1.9**	**5.2**	**5332-73-0**
Methoxypropyl formamide	117.15	1.012	255[l]	255	—	—	3.24	36.10	M	115.7	11.3	9.1	5.0	4.6	71172-42-4
Methyl acetate	74.08	0.898	15	57.5	11.80	EA	0.37	24.41	M	79.7	9.2	7.6	3.5	3.7	79-20-9
Methylamyl acetate (2-hexyl acetate)	144.21	0.852	96	145-150	0.50	HC	0.96	23.08	M	169.0	9.1	8.0	3.2	2.8	5953-49-1
Methyl iso-amyl ketone	114.19	0.884	106	146	0.46	AS	0.70	25.33	M	142.8	8.5	7.8	2.8	2.0	110-12-3
Methyl-n-amyl-ketone	114.19	0.816	117	149-150	0.34	AS	0.74	26.12	M	140.3	9.7	7.9	2.7	4.9	110-43-0
2-Methyl-1-butanol	88.15	0.811	110	130	0.24	UC	4.21	24.95	S	107.8	10.4	7.6	2.3	6.7	137-32-6
Methy iso-butyl carbinol	102.18	0.805	103	132	0.30	EA	4.07	22.63	S	126.9	9.7	7.5	1.6	6.0	108-11-2
Methyl t-butyl ether	**88.15**	**0.754**	**14**	**53-56**	**8.14**	**HC**	**0.34**	**19.07**	**M**	**116.9**	**7.4**	**6.7**	**1.7**	**2.5**	**1634-04-4**
Methyl iso-butyl ketone	100.16	0.796	56	117-118	1.70	AS	0.54	23.26	M	125.8	8.3	7.5	3.0	2.0	108-10-1
Methyl n-butyl ketone	100.16	0.808	95	127	0.98	AS	0.58	25.45	M	123.3	8.6	6.9	3.9	3.5	591-78-6
Methyl n-butyrate	102.13	0.894	53	102-103	2.41	HC	0.55	24.46	M	114.2	8.8	7.6	2.1	3.8	623-42-7
Methyl caproate	130.19	0.881	113	151	0.336	HC	0.84	25.90	M	147.8	8.5	7.6	1.6	3.4	106-70-7
Methylcyclohexane	98.19	0.766	25	101	2.99	HC	0.68	23.29	P	128.2	7.8	7.8	0.0	0.5	108-87-2
Methylcyclopentane	84.16	0.743	-11	72.0	5.93	HC	0.63	22.30	P	113.3	7.9	7.7	1.7	0.0	96-37-7
Methylene chloride	84.94	1.314	None	40	14.50	EA	0.42	27.33	P	63.9	9.9	8.9	3.1	3.0	75-09-2
Methyl ethyl ketone	72.10	0.801	26	80	4.03	HC	0.43	24.18	M	90.1	9.3	7.8	4.4	2.5	78-93-3
Methyl n-hexyl ketone	128.22	0.815	145	173	0.116	HC	0.95	26.60	M	157.3	8.4	7.4	3.5	1.9	111-13-7

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See page 7 for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See page 7 for the list of references from which these parameters were obtained.
[l]29 mm Hg. [m]733 mm Hg. [t]PMCC. [u]Extrapolated to 25°C.

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Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
N-Methylmorpholine	**101.15**	**0.916**	**75**	**115-116**	**1.76**	**HC**	**0.86**	**27.22**	**S**	**110.4**	**10.5**	**8.8**	**4.0**	**4.2**	**109-02-4**
1-Methylnaphthalene	142.20	0.997	180	240-243	0.005	HC	2.93	36.26	P	142.6	10.4	10.1	0.4	2.3	90-12-0
Methyl oleate	296.50	0.875	230	218[n]	<0.005	HC	6.20	31.30	M	338.9	7.6	7.1	1.9	1.8	112-62-9
2-Methylpentane	86.18	0.648	-10	62	8.32	HC	0.308	17.7	P	133.0	7.0	7.0	0.0	0.0	107-83-5
3-Methylpentane	86.18	0.659	20	64	7.41	HC	0.437	17.7	P	130.8	7.1	7.1	0.0	0.0	96-14-0
Methyl iso-propyl ketone	86.13	0.801	43	94-95	2.90	AS	0.43	24.61	M	107.0	8.8	7.2	3.0	4.0	563-80-4
Methyl n-propyl ketone	86.13	0.808	45	100-101	2.40	AS	0.50	24.90	M	106.3	9.6	7.7	4.4	3.7	107-87-9
N-Methyl-2-pyrrolidinone	99.14	1.029	187	202	0.03	DU	1.65	40.10	M	96.5	11.2	8.8	6.0	3.5	872-50-4
Monoethanolamine (MEA)	**61.08**	**1.008**	**200**	**170**	**0.015**	**HC**	**19.33**	**48.16**	**S**	**60.6**	**15.4**	**8.4**	**7.6**	**10.4**	**141-43-5**
Morpholine	**87.12**	**0.995**	**96**	**129**	**0.66**	**HC**	**2.04**	**36.94**	**S**	**87.6**	**10.5**	**9.2**	**2.4**	**4.5**	**110-91-8**
Naphtha	107	0.705	25	48-173	1.81	HC	0.41	19.63	P	151.8	7.3	7.3	0.0	0.0	64742-88-7
Naphthalene (mp 83°C)	128.17	1.175	174	217-218	NA[o]	—	0.85[p]	32.88[p]	P	109.1	9.9	9.4	1.0	2.9	91-20-3
Nitrobenzene	123.11	1.193	190	210-211	0.029	HC	1.85	42.80	P	103.2	10.8	9.8	4.2	2.0	98-95-3
Nitroethane	75.07	1.045	87	114-115	1.26	HC	0.71	31.71	P	71.5	11.1	7.8	7.6	2.2	79-24-3
Nitromethane	61.04	1.123	95	100-101	1.37	HC	0.61	36.17	P	54.3	12.3	7.7	9.2	2.5	75-52-5
1-Nitropropane	89.10	0.994	93	131-132	0.78	HC	0.79	29.47	P	89.2	10.4	8.8	5.5	0.0	108-03-2
2-Nitropropane	89.09	0.988	99	119-121	1.15	HC	0.74	29.31	P	86.9	10.1	7.9	5.9	2.0	79-46-9
n-Nonane	128.26	0.714	88	151	0.415	HC	0.66	22.42	P	179.6	7.7	7.7	0.0	0.0	111-84-2
Nonylphenol	**220.36**	**0.934**	**>230**	**295-308**	**<0.005**	**HC**	**1690.0**	**33.92**	**S**	**235.9**	**9.5**	**8.1**	**2.0**	**4.5**	**25154-52-3**
n-Octane	114.23	0.699	60	125-127	1.23	HC	0.52	21.17	P	163.5	7.8	7.6	0.0	0.0	111-65-9
1-Octanol	130.23	0.824	178	196	0.007	HC	7.41	27.10	S	158.0	10.2	8.3	1.6	5.8	111-87-5
2-Octanol	130.23	0.816	160	174-181	0.018	HC	6.24	26.09	S	159.6	9.9	7.9	2.4	5.4	4128-31-8
Oleyl alcohol (65%, technical grade)	268.49	0.846	>230	207[q]	<0.005	HC	27.95	31.55	S	317.4	8.1	7.0	1.3	3.9	143-28-2
PB (propylene glycol butyl ether)	132.20	0.878	138	170.2	0.08	EA	3.05	26.85	M	149.9	11.2	8.5	3.3	6.5	5131-66-8
iso-Pentane (2-methylbutane)	72.15	0.616	-70	30	12.40	HC	0.22	17.47	P	117.2	6.7	6.7	0.0	0.0	78-78-4
n-Pentane	72.15	0.622	-57	35-36	10.46	HC	0.22	15.49	P	116.0	7.1	7.1	0.0	0.0	109-66-0
1-Pentanol	88.15	0.807	120	136-138	0.148	HC	3.48	25.26	S	109.0	10.6	7.8	2.2	6.8	71-41-0
PG (propylene glycol)	**76.10**	**1.032**	**225**	**187**	**0.01**	**AS**	**43.22**	**36.52**	**S**	**73.6**	**14.8**	**8.2**	**4.6**	**11.4**	**57-55-6**
PGDA (propylene glycol diacetate)	160.17	1.054	204	186	0.032	HC	2.59	31.03	M	152.0	9.3	7.7	2.2	4.7	623-84-7
Phenol (mp 41°C)	94.11	1.071	175	182	NA[r]	—	3.44[s]	37.98[s]	S	87.9	11.8	8.8	2.9	7.3	108-95-2
2-Phenoxyethanol	138.17	1.099	230	237	0.001	HC	20.32	42.30	M	125.7	11.5	6.7	5.1	7.8	122-99-6
alpha-Pinene (+/-, racemic)	136.24	0.854	90	155-156	0.41	HC	1.32	27.60	P	159.5	7.9	7.6	2.1	0.0	2437-95-8
alpha-Pinene [(1R)-(+), +50.7° rotation]	136.24	0.853	90	155-156	0.465	HC	1.31	26.30	P	159.7	7.9	7.6	2.1	0.0	7785-70-8
alpha-Pinene [(1S)-(-), -50.7° rotation]	136.24	0.851	90	155-156	0.456	HC	1.30	26.40	P	160.1	7.9	7.6	2.1	0.0	7785-26-4
Pine oil (alpha-terpineol, -30° rotation)	154.25	0.929	193	217-218	0.005	HC	36.50	31.60	S	166.0	9.7	6.8	3.9	5.0	10482-56-1
PM (propylene glycol methyl ether)	90.12	0.918	93	118-119	0.814	HC	1.68	27.50	M	97.6	12.2	7.8	4.6	8.0	107-98-2
PMA (propylene glycol methyl ether acetate)	132.16	0.962	115	140-150	0.368	HC	1.09	27.70	M	136.4	9.6	8.9	1.8	3.0	84540-57-8
PP (propylene glycol propyl ether)	118.18	0.880	119	150	0.20	EA	2.26	27.00	M	134.3	11.2	8.4	3.5	6.6	1569-01-3
Propionitrile	55.08	0.769	43	97	1.91	HC	0.39	26.85	P	71.6	10.6	7.5	7.0	2.7	107-12-0
iso-Propyl acetate	102.14	0.868	62	85	3.50	AS	0.54	21.79	M	117.0	8.9	7.6	1.6	4.3	108-21-4
n-Propyl acetate	102.14	0.884	55	101-102	2.30	EA	0.55	23.83	M	114.9	9.5	8.0	3.2	4.0	109-60-4
iso-Propyl alcohol	60.09	0.78	72	82.4	1.70	EA	2.04	21.00	S	76.8	11.5	7.7	3.0	8.0	67-63-0
n-Propyl alcohol	60.09	0.800	59	97	0.933	HC	1.97	23.55	S	75.2	12.0	7.8	3.3	8.5	71-23-8
n-Propylamine	59.11	0.715	-35	48	6.11	HC	0.37	22.12	S	82.7	9.6	8.3	2.4	4.2	107-10-8
Propylene carbonate (JEFFSOL® PC)	**102.09**	**1.200**	**275[t]**	**242**	**<0.005**	**HC**	**2.50**	**40.9**	**M**	**85.0**	**13.3**	**9.8**	**8.8**	**2.0**	**108-32-7**
Propylene oxide	**58.08**	**0.823**	**-35**	**34**	**8.79**	**HC**	**0.301**	**22.2**	**M**	**70.6**	**9.3**	**6.6**	**4.0**	**5.1**	**75-56-9**
iso-Propyl ether	102.18	0.720	9	68-69	7.32	HC	0.33	17.62	M	141.9	7.0	6.6	2.3	0.7	108-20-3
iso-Propyl palmitate	298.51	0.849	>230	342	<0.005	HC	6.38	28.80	M	351.6	7.5	7.0	1.9	1.8	142-91-6
PTB (propylene glycol t-butyl ether)	132.20	0.869	113	151	0.25	HC	3.34	24.35	M	151.6	9.7	7.3	2.1	6.0	57018-52-7
Pyridine	79.10	0.974	68	115	1.37	HC	0.88	36.68	S	81.2	10.6	8.6	4.9	3.8	110-86-1
2-Pyrrolidinone	85.11	1.116	230	245	0.001	HC	13.40	45.78	S	76.3	13.9	9.5	8.5	5.5	616-45-5
Quinoline	129.16	1.089	214	237-239	0.006	HC	3.40	43.00	S	118.6	10.7	9.5	3.4	3.7	91-22-5
Styrene	104.15	0.905	88	145-146	0.536	HC	0.71	30.97	P	115.1	9.3	8.2	4.4	0.0	100-42-5
Sulfolane	120.17	1.258	330	285	<0.005	HC	11.55	50.92	M	95.5	13.4	—	—	—	126-33-0
alpha-Terpineol (-30° rotation)	154.25	0.929	193	217-218	0.005	HC	36.50	31.60	S	166.0	9.3	6.8	3.9	5.0	10482-56-1

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See page 7 for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See page 7 for the list of references from which these parameters were obtained.
[n]20 mm Hg. [o]Not applicable — material is a solid at 25°C. [p]90°C (density at 90°C is 0.970 g/ml). [q]13 mm Hg. [r]Not applicable — material is a solid at 25°C. [s]50°C (density at 50°C is 1.050 g/ml). [t]PMCC.

Compound	Molecular Weight	Density, 25°C, g/ml	Flash Point, CC, °F	Normal Boiling Point, 760 mm Hg, °C	Evaporation Rate[1] 25°C, NBAC=1.00	Source[2]	Viscosity, 25°C, cp	Surface Tension, 25°C, dynes/cm	Hydrogen Bonding Group[2]	Molar Volume, cc/gM	Solubility Parameters[3] SPo	SPd	SPp	SPh	CAS Registry Number
alpha-Terpineol (+11° rotation)	154.25	0.932	193	217-218	0.006	HC	39.23	30.90	S	166.0	9.3	6.8	3.9	5.0	98-55-5
1,1,2,2-Tetrachloroethane	167.85	1.582	None	147	0.68	HC	1.64	35.24	P	105.2	10.6	9.2	2.5	4.6	79-34-5
Tetrachloroethylene	165.83	1.619	None	121	2.59	HC	0.84	31.59	P	101.1	9.9	9.3	3.2	1.4	127-18-4
Tetraethylene glycol	194.23	1.121	350	314	<0.01	AS	44.60	45.12	S	173.3	11.9	8.1	2.8	8.2	112-60-7
Tetraglyme (tetraethylene glycol dimethyl ether)	222.28	1.005	285	275-276	—	—	3.43	33.9	M	221.2	8.7	7.7	1.0	4.0	143-24-8
Tetrahydrofuran	72.10	0.882	1	67	6.30	EA	0.46	26.50	M	81.7	9.5	8.2	2.8	3.9	109-99-9
Tetrahydrofurfuryl alcohol	102.13	1.050	183	178	0.04	HC	5.35	37.Q0	S	97.3	13.5	9.8	5.0	7.8	97-99-4
Tetralin	132.21	0.969	171	207	0.035	HC	2.01	33.16	P	136.4	9.8	9.6	1.0	1.4	119-64-2
Tetramethyl urea	116.16	0.967	150	177	0.09	HC	1.41	32.90	M	120.4	10.6	8.2	4.0	5.4	632-22-4
Toluene	92.14	0.863	40	111	2.00	AS	0.57	28.16	P	106.8	8.9	8.8	0.7	1.0	108-88-3
Toluene diisocyanate	174.20	1.212	194	250	<0.01	HC	3.00	50.81	S	143.7	11.6	7.5	8.0	3.8	26417-62-5
TPM (tripropylene glycol methyl ether)	206.29	0.961	237	236-251	<0.01	AR	5.64	29.35	M	214.1	9.5	7.4	2.0	5.7	20324-33-8
Tri-n-butyl phosphate	266.32	0.975	380	182[w]	<0.001	HC	3.37	27.77	M	273.1	8.8	8.0	3.1	2.1	126-73-8
1,1,1-Trichloroethane	133.42	1.334	None	74-76	6.00	EA	0.80	25.14	P	100.4	8.9	8.3	2.1	1.0	71-55-6
1,1,2-Trichloroethylene	131.39	1.460	None	87	6.39	HC	0.53	29.04	P	90.0	9.3	8.8	1.5	2.6	79-01-6
Trichlorofluoromethane	137.37	1.480	None	23.7	19.40	HC	0.42	18.86	P	92.8	7.6	7.5	1.0	0.0	75-69-4
1,1,2-Trichlorotrifluoroethane (Freon 113)	187.38	1.571	None	47-48	21.00	HC	0.74	17.82	P	119.3	7.2	7.2	0.8	0.0	76-13-1
Tricresyl phosphate (90%)	368.37	1.140	230	265[x]	<0.005	HC	71.70	44.31	M	323.1	11.3	9.3	6.0	2.2	1330-78-5
1-Tridecanol	200.37	0.819	>230	156[y]	<0.008	HC	23.23	29.98	S	244.6	8.4	7.0	1.5	4.4	112-70-9
Triethanolamine (TEA)	**149.19**	**1.120**	**365**	**190[z]**	**<0.005**	**HC**	**607.70**	**46.07**	**S**	**133.2**	**14.3**	**8.3**	**4.3**	**10.8**	**102-71-6**
Triethylene glycol	**150.17**	**1.121**	**330**	**285-287**	**<0.005**	**HC**	**39.51**	**45.13**	**S**	**134.0**	**13.5**	**7.8**	**6.1**	**9.1**	**112-27-6**
Triethyl phosphate	182.16	1.068	240	215	0.014	HC	1.56	28.98	S	170.6	10.9	8.2	5.6	4.5	78-40-0
Triglyme (triethylene glycol dimethyl ether)	178.23	0.982	23	216	—	—	1.96	31.3	M	181.5	8.7	7.7	1.1	4.0	112-49-2
2,2,4-Trimethylpentane	114.23	0.688	18	98-99	3.63	HC	0.48	18.32	P	166.0	7.0	7.0	0.0	0.0	540-84-1
Trimethyl phosphate	140.08	1.195	245	197	0.043	HC	1.99	36.96	M	117.2	12.4	8.2	7.8	5.0	512-56-1
Tripropylene glycol	192.26	1.016	>280	268	<0.005	HC	55.05	33.70	S	189.2	10.6	7.1	2.3	7.6	85550-18-1
Turpentine (alpha-pinene, +/-, racemic)	136.24	0.854	90	155-156	0.41	HC	1.32	27.60	P	159.5	7.9	7.6	2.1	0.0	2437-95-8
Water	18.02	0.997	None	100	0.36	AS	0.90	72.00	S	18.0	23.4	7.6	7.8	20.7	7732-18-5
Xylene (mixed isomers)	106.16	0.856	85	135-143	0.77	AS	0.63	27.63	P	121.9	9.9	9.8	0.9	1.2	1330-20-7
o-Xylene	106.16	0.871	90	143-145	0.54	HC	0.75	29.48	P	121.9	9.0	8.3	3.7	0.0	95-47-6
p-Xylene	106.16	0.859	81	138	0.72	HC	0.60	27.76	P	123.6	8.8	8.1	3.4	1.0	106-42-3

[1]Relative to n-butyl acetate, which has been assigned a value of 1.
[2]See notes below for explanation of abbreviations.
[3]SPo is calculated by taking the square root of the sum of the squares of the Hansen solubility parameters SPd, SPp, and SPh. See notes below for the list of references from which these parameters were obtained.
[w]22 mm Hg. [x]10 mm Hg. [y]13 mm Hg. [z]5 mm Hg.

NOTES:
Evaporation rate data sources are indicated by the following abbreviations:
AR — Arco (Lyondell).
AS — ASTM book, test D3539.
DO — Dow.
DU — Du Pont.
EA — Eastman.
EX — Exxon.
HC — Huntsman Corporation.
UC — Union Carbide.

Hydrogen bonding groups are indicated by the following abbreviations:
M — Moderately hydrogen bonded solvents (ketones, esters, ethers and glycol monoethers).
P — Poorly hydrogen bonded solvents (hydrocarbons and halo-, nitro-, and cyano-substituted hydrocarbons).
S — Strongly hydrogen bonded solvents (alcohols, amines, acids, amides, and aldehydes).

Hansen solubility parameters SPd, SPp, and SPh ($cal^{1/2}$ $cm^{-3/2}$) were obtained from the following references:
"Arcosolve PO-Based Glycol Ethers and Acetates Coatings Selector Chart," Arco Chemical Company.
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"Ucar Solvents Selection Guide for Coatings," Union Carbide Company, Solvents and Coatings Materials Division.

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