

## Physical and Chromatographical Properties of Some Common Solvents / According to Scott and Kucera\*

OmniSolv® Product Number	Solvent	Relative K' SiO <sub>2</sub> Heptane	$\epsilon_0$ Solvent Strength (SiO <sub>2</sub> )	Solubil. Param. (20°C)	RI (20°C)	$\eta$ (Cp20°C)	Dielect. Const. (20°C)	Dipole Moment (25°C)	Density (20°C)	Boiling Point (°C)	Mol. Wt.	UV Cutoff nm
HX0078	n-Heptane	0.00	0.01	7.4	1.388	0.42	1.924	0.00	0.6838	98.4	100.21	197
HX0296	n-Hexane	0.00	0.00	7.3	1.375	0.32	1.880	0.09	0.6594	68.7	86.18	195
TX1389	2,2,4-Trimethylpentane	0.01	0.01	7.0	1.391	0.50	1.940	0.00	0.6919	99.2	114.23	200
PX0167	n-Pentane	0.01	0.00	7.1	1.358	0.23	1.844	0.00	0.6262	36.1	72.15	200
CX2286	Cyclohexane	0.01	0.03	8.2	1.427	0.98	2.023	0.00	0.7786	80.7	84.16	200
N/A	Carbon Tetrachloride	0.14	0.11	8.6	1.460	0.97	2.238	0.00	1.5940	76.7	153.82	265
CX0396	Carbon Disulfide	0.25	0.20	10.0	1.628	0.37	2.641	0.06	1.2628	46.2	76.14	380
TX1056	1,2,4-Trichlorobenzene	0.44	-	-	1.572	-	-	1.25	1.4542	213.5	181.45	307
CX1054	Chloroform	0.63	0.26	9.1	1.446	0.57	4.806	1.15	1.4892	61.1	119.38	245
CX0914	n-Butyl Chloride	0.65	-	-	1.402	0.45	7.39	1.90	0.8862	78.5	92.57	220
DX0685 <sup>(1)</sup>	o-Dichlorobenzene	0.68	-	-	1.552	1.41	9.93	2.27	1.3059	180.5	147.01	306
TX0737	Toluene	1.20	0.23	8.9	1.497	0.59	2.379	0.31	0.8670	110.6	92.14	285
DX0831	Dichloromethane	1.30	0.32	9.6	1.424	0.43	9.08	1.14	1.3257	39.8	84.93	231
EX0241	Ethyl Acetate	87.3	0.38	8.6	1.372	0.45	6.02	1.88	0.9006	77.1	88.11	254
AX0116	Acetone	156.	0.47	9.4	1.359	0.32	20.70	2.69	0.7900	56.3	58.08	329
TX0279	Tetrahydrofuran	160.	0.35	9.1	1.407	0.55	7.58	1.75	0.8892	66.0	72.11	212
AX0142	Acetonitrile	167.	0.50	11.8	1.344	0.36	37.5	3.44	0.7822	81.6	41.05	189
DX2091	p-Dioxane	183.	0.43	9.8	1.422	1.32	2.21	0.45	1.0336	101.3	88.11	215
PX1834	2-Propanol	193.	0.63	11.4	1.377	2.49	19.9	1.66	0.7855	82.3	60.10	204
MX0488	Methanol	546.	0.73	12.9	1.329	0.55	33.6	2.87	0.7913	64.7	32.04	204
DX1726	N,N-Dimethylformamide	959.	-	11.5	1.430	0.92	36.7	3.86	0.9487	153.0	73.10	268

<sup>(1)</sup>Reagent grade

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	Acetic Acid
	Acetone
	Acetonitrile
	Benzene
	n-Butanol
	Butyl Acetate
	Carbon Tetrachloride
	Chloroform
	Cyclohexane
	1,2-Dichloroethane <sup>1</sup>
	Dichloromethane <sup>2</sup>
	Dimethylformamide
	Dimethyl Sulfoxide <sup>3</sup>
	1,4-Dioxane
	Ethanol
	Ethyl Acetate
	Di-Ethyl Ether
	Heptane
	Hexane
	Methanol
	Methyl-t-Butyl Ether <sup>4</sup>
	Methyl Ethyl Ketone <sup>5</sup>
	Pentane
	n-Propanol
	2-Propanol <sup>6</sup>
	Di-Iso-Propyl Ether
	Tetrahydrofuran
	Toluene
	Tichloroethylene
	Water
	Xylene
Xylene	
Water	
Tichloroethylene	
Toluene	
Tetrahydrofuran	
Di-Iso-Propyl Ether	
2-Propanol	
n-Propanol	
Pentane	
Methyl Ethyl Ketone	
Methyl-t-Butyl Ether	
Methanol	
Hexane	
Heptane	
Di-Ethyl Ether	
Ethyl Acetate	
Ethanol	
1,4-Dioxane	
Dimethyl Sulfoxide	
Dimethylformamide	
Dichloromethane	
1,2-Dichloroethane	
Cyclohexane	
Chloroform	
Carbon Tetrachloride	
Butyl Acetate	
n-Butanol	
Benzene	
Acetonitrile	
Acetone	
Acetic Acid	

■ Immiscible

□ Miscible

Immiscible means that in some proportions two phases will be produced

#### Synonym Table

- <sup>1</sup>Ethylene Chloride
- <sup>2</sup>Methylene Chloride
- <sup>3</sup>Methyl Sulfoxide
- <sup>4</sup>tert-Butyl Methyl Ether
- <sup>5</sup>2-Butanone
- <sup>6</sup>iso-Propyl Alcohol

Product Number	Description	Formula	X
HX0078	n-Heptane	C <sub>7</sub> H <sub>16</sub>	
HX0295	n-Hexane	C <sub>6</sub> H <sub>14</sub>	0,0
CX2286	Cyclohexane	C <sub>6</sub> H <sub>12</sub>	0,0
TX1389	Trimethylpentane	C <sub>8</sub> H <sub>18</sub>	0,4
N/A	1,1,2-Trichlorotrifluoroethane	Cl <sub>2</sub> FCClF <sub>2</sub>	
N/A	Carbontetrachloride	CCl <sub>4</sub>	1,7
TX0737	Toluene	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	2,3
MX0826	Methyl-t-Butyl Ether	C <sub>4</sub> H <sub>9</sub> OCH <sub>3</sub>	2,9
CX1054	Chloroform	CHCl <sub>3</sub>	4,4
DX0796	1,2-Dichloroethane	ClCH <sub>2</sub> CH <sub>2</sub> Cl	3,7
DX0831	Dichloromethane	CH <sub>2</sub> Cl <sub>2</sub>	3,4
BX1777	Butyl Alcohol	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> OH	3,9
AX0142	Acetonitrile	CH <sub>3</sub> CN	6,2
PX1834	2-Propanol	CH <sub>3</sub> CH(OH)CH <sub>3</sub>	4,3
EX0241	Ethyl Acetate	CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub>	4,3
AX0116	Acetone	CH <sub>3</sub> COCH <sub>3</sub>	5,4
EX0290	Ethyl Alcohol	C <sub>2</sub> H <sub>5</sub> OH	5,2
DX2091	1,4-Dioxane	C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>	4,8
TX0279	Tetrahydrofuran	C <sub>4</sub> H <sub>8</sub> O	4,2
MX0488	Methanol	CH <sub>3</sub> OH	6,6
WX0004	Water	H <sub>2</sub> O	9,0

OmniSolv® is a registered trademark of EMD Chemicals Inc.

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 LT 957152 REV 4/06