

Physical Properties of Solvents

Solvent Name	Density	Boiling Point (°C)	Melting Point (°C)	Flash Point (°C)	Viscosity (cp, 20 °C)	Dielectric Constant (20°C)	UV Cutoff (nm)	Refractive Index (20 °C)
Acetic acid	1.049	118	17	40	1.31(15)	6.15	–	1.372
Acetic anhydride	1.082	138-140	-73	54	–	–	–	1.390
Acetone	0.791	56	-94	-17	0.32	20.7(25)	330	1.359
Acetonitrile	0.786	82	-48	5	0.37	37.50	190	1.344
Benzene	0.874	80	6	-11	0.65	2.28	280	1.501
Benzonitrile	1.010	191	-13	71	1.24(25)	–	300	1.528
1-Butanol	0.810	117.7	-90	35	2.95	17.80	215	1.399
2-Butanone (or methyl ethyl ketone)	0.805	80	-87	-3	0.42(15)	18.50	329	1.379
Butyl acetate	0.882	124-126	-78	22	0.73	–	254	1.394
tert-Butyl methyl ether	0.740	53-56	–	-32	0.27	–	210	1.369
Carbon disulfide	1.266	46	-112	-30	0.37	–	380	1.627
Carbon tetrachloride	1.594	77	-23	–	0.97	2.24	263	1.460
Chlorobenzene	1.106	132	-45	23	0.80	2.71	287	1.524
1-Chlorobutane (or butyl chloride)	0.886	77-78	-123	-6	0.35	–	225	1.402
Chloroform	1.492	61	-64	–	0.58	4.81	245	1.446
Cyclohexane	0.779	80	7	-18	0.98	2.02	200	1.426
Cyclopentane	0.751	50	-94	-37	0.44	1.97	200	1.400
1,2-Dichlorobenzene	1.306	180	-17	65	1.32(25)	9.93(25)	295	1.551
1,2-Dichloroethane	1.256	83	-35	15	0.79	–	225	1.445
Dichloromethane	1.325	40	-97	–	0.45(15)	9.08	233	1.424
Di(ethylene glycol) diethyl ether (or 2-ethoxyethyl ether)	0.909	180-190	–	71	–	–	260	1.412
N,N-Dimethylacetamide	0.937	165	-20	70	2.14	37.80	268	1.438
N,N-Dimethylformamide	0.944	153	-61	57	0.92	36.70	268	1.430
1,4-Dioxane	1.034	100-102	12	12	1.44(15)	2.209(25)	215	1.422
Ether	0.706	34.6	-116	-40	0.24	4.34	218	1.353
Ethyl acetate	0.902	77	-84	-3	0.46	6.02(25)	256	1.372
Ethyl alcohol	0.816	78	-114	16	1.10(25)	24.55(25)	205	1.363
Ethylene glycol dimethyl ether (or monoglyme)	0.867	85	-58	0	0.46(25)	7.20(25)	220	1.379
Heptane	0.684	98	-91	-1	0.42	1.92	220	1.387
Hexane	0.659	69	-95	-23	0.31	1.89	200	1.375
Hexanes	0.672	68-70	–	-22	–	–	210	1.379
2-Methoxyethanol	0.965	124-125	-85	46	1.72	16.90	210	1.402
2-Methoxyethyl acetate	1.009	145	-65	43	–	–	254	1.402
Methyl alcohol	0.791	64.7	-98	11	0.55	32.6(25)	205	1.329
2-Methylbutane	0.620	30	–	-56	–	–	192	1.354
3-Methyl-1-butanol (or isoamyl alcohol)	0.809	130	-117	45	–	–	215	1.406
4-Methyl-2-pentanone (or methyl isobutyl ketone)	0.801	117-118	-80	13	0.58	–	334	1.396
2-Methyl-1-propanol (or isobutyl alcohol)	0.803	108	-108	27	4.70(15)	15.8(25)	200	1.396
2-Methyl-2-propanol	0.775	83	25-26	11	–	–	215	1.387
1-Methyl-2-pyrrolidinone	1.028	81-82 (10mm)	-24	86	1.67(25)	32.00	285	1.470
Methyl sulfoxide	1.101	189	18.4	85	2.24	–	268	1.479
Nitromethane	1.127	101.2	-29	35	0.67	–	380	1.382
1-Octanol	0.827	196	-15	81	10.6(15)	–	215	1.429
Pentane	0.626	35-36	-130	-49	0.24	1.84	200	1.358
3-Pentanone	0.813	102	-40	-49	–	–	330	1.392
1-Propanol	0.804	97	-127	15	2.26	20.1(25)	210	1.384
2-Propanol	0.785	82.4	-89.5	22	2.86(15)	18.3(25)	210	1.377
Propylene carbonate	1.189	240	-55	132	–	–	235	1.421
Pyridine	0.978	115	-42	20	0.95	12.3(25)	330	1.510
Tetrachloroethylene	1.623	121	-22	–	–	–	290	1.506
Tetrahydrofuran	0.889	65-67	-108	-17	0.55	7.60	212	1.407
Toluene	0.865	110.6	-93	4	0.59	2.4(25)	284	1.496
1,1,2-Trichlorotrifluoroethane	1.570	47-48	-35	–	0.69	–	231	1.358
2,2,4-Trimethylpentane	0.692	98-99	-107	-7	0.50	1.94	215	1.391
Water	1.000	100	0	–	1.00	78.54	<190	1.333
m-Xylene	0.868	138-139	–	25	–	–	–	1.497
o-Xylene	0.870	143-145	-23	32	0.81	2.57	288	1.505
p-Xylene	0.866	138	12	27	0.65	2.27	290	1.495