

Ignition Temperatures and Group Classifications for Flammable Gases and Vapors

MATERIAL	GROUP	AUTOIGNITION TEMPERATURE	
		DEGREES F	DEGREES C
Acetaldehyde	C	347	175
Acetic Acid	D	867	464
Acetic Anhydride	D	600	316
Acetone	D	869	465
Acetone Cyanohydrin	D	1270	688
Acetonitrile	D	975	524
Acetylene	A	581	305
Acrolein (Inhibited)	B (C)	455	285
Acrylic Acid	D	820	438
Acrylonitrile	D	898	481
Allyl Alcohol	C	713	378
Allyl Chloride	D	905	485
Alpha-Methyl Styrene	D	1066	574
Ammonia	D	928	498
n-Amyl Acetate	D	680	360
Aniline	D	1139	615
Benzene	D	928	498
Benzyl Chloride	D	1085	585
1,3-Butadiene	B (D)	788	420
Butane	D	550	288
1-Butanol	D	650	343
2-Butanol	D	761	405
n-Butyl Acetate	D	790	421
n-Butyl Acrylate (Inhibited)	D	559	293
Butylamine	D	594	312
Butylene	D	725	385
n-Butyraldehyde	C	425	218
n-Butyric Acid	D	830	443
Carbon Disulfide	*	194	90
Carbon Monoxide	C	1128	609
Chlorobenzene	D	1099	593
Cresol	D	1038–1110	559–599
Crotonaldehyde	C	450	232
Cumene	D	795	424
Cyclohexane	D	473	245
Cyclohexanol	D	572	300
Cyclohexanone	D	473	245
Cyclohexene	D	471	244
Cyclopropane	D	938	503
p-Cymene	D	817	436
n-Decanol	D	550	288
Decene	D	455	235
Di-Isobutyl Ketone	D	745	396
Di-Isobutylene	D	736	391
Di-N-Propylamine	C	570	299
Diacetone Alcohol	D	1118	603
o-Dichlorobenzene	D	1198	647
1,1-Dichloroethane	D	820	438
1,2-Dichloroethylene	D	860	460
Dicylopentadiene	C	937	503
Diethyl Benzene	D	743–842	395–450
Diethyl Ether	C	320	160
Diethylamine	C	594	312
Diethylene Glycol Monobutyl Ether	C	442	228
Diethylene Glycol Monomethyl Ether	C	465	241
n-n-Dimethyl Aniline	C	700	371
Dimethyl Formamide	D	833	455
Dimethyl Sulfate	D	370	188

* Carbon Disulfide has characteristics which require safeguards beyond those required for any of the above groups.

MATERIAL	GROUP	AUTOIGNITION TEMPERATURE	
		DEGREES F	DEGREES C
Dimethylamine	C	752	400
1,4-Dioxane	C	356	180
Dipentene	D	458	237
Dodecene	D	491	255
Du-Isopropylamine	C	600	316
Epichlorohydrin	C	772	411
Ethane	D	882	472
Ethanol	D	685	363
Ethyl Acetate	D	800	427
Ethyl Acetate (Inhibited)	D	702	372
Ethyl Benzene	D	810	432
Ethyl Chloride	D	966	519
Ethyl Formate	D	851	455
2-Ethyl Hexanol	D	448	231
2-Ethyl Hexyl Acrylate	D	485	252
Ethyl Mercaptan	C	572	300
Ethylamine	D	725	385
Ethylene	C	842	450
Ethylene Chlorohydrin	D	797	425
Ethylene Dichloride	D	775	413
Ethylene Glycol Monobutyl Ether	C	460	238
Ethylene Glycol Monobutyl Ether Acetate	C	645	340
Ethylene Glycol Monoethyl Ether	C	455	235
Ethylene Glycol Monoethyl Ether Acetate	C	715	379
Ethylene Glycol Monomethyl Ether	D	545	285
Ethylene Oxide	B (C)	804	429
Ethylenediamine	D	725	385
Ethylenimine	C	608	320
2-Ethylehexaldehyde	C	375	191
Formaldehyde (Gas)	B	795	429
Formic Acid (90%)	D	813	434
Fuel Oils	D	410–765	210–407
Furfural	C	600	316
Furfuryl Alcohol	C	915	490
Gasoline	D	536–880	280–471
Heptane	D	399	204
Heptene	D	500	260
Hexane	D	437	225
2-Hexanone	D	795	424
Hexenes	D	473	245
Hydrazine	C	74–518	23–270
Hydrogen	B	968	520
Hydrogen Cyanide	C	1000	538
Hydrogen Sulfide	C	500	260
Iso-Butyl Acetate	D	790	421
Iso-Octyl Aldehyde	C	387	197
Isoamyl Acetate	D	680	360
Isoamyl Alcohol	D	662	350
Isobutyl Acrylate	D	800	427
Isobutyraldehyde	C	385	196
Isophorone	D	860	460
Isoprene	D	428	220
Isopropyl Acetate	D	860	460
Isopropyl Ether	D	830	443
Isopropylamine	D	756	402
Kerosene	D	410	210
Liquified Petroleum Gas	D	761–842	405–450
Mesityl Oxide	D	652	344
Methane	D	999	537
Methanol	D	725	385

MATERIAL	GROUP	AUTOIGNITION TEMPERATURE	
		DEGREES F	DEGREES C
Methyl Acetate	D	850	454
Methyl Acrylate	D	875	468
Methyl Ether	C	662	350
Methyl Ethyl Ketone	D	759	404
Methyl Formal	C	460	238
Methyl Formate	D	840	449
Methyl Isobutyl Ketone	D	840	449
Methyl Isocyanate	D	994	534
Methyl Methacrylate	D	792	422
Methyl N-Amyl Ketone	D	740	393
2-Methyl-1-Propanol	D	780	416
2-Methyl-2-Propanol	D	892	478
Methylamine	D	806	430
Methylcyclohexane	D	482	250
Methylcyclohexanol	D	565	296
Monoethanolamine	D	770	410
Monoisopropanolamine	D	705	374
Monomethyl Aniline	C	900	482
Monomethyl Hydrazine	C	382	194
Morpholine	C	590	310
Naphtha (Coal Tar)	D	531	277
Naphtha (Petroleum)	D	550	288
Nitrobenzene	D	900	482
Nitroethane	C	778	414
Nitromethane	C	785	418
2-Nitropropane	C	802	428
1-Nitropropane	C	789	421
Nonane	D	401	205
Octane	D	403	206
Octene	D	446	230
Pentane	D	470	243
1-Pentanol	D	572	300
2-Pentanone	D	846	452
1-Pentene	D	527	275
Propane	D	842	450
2-Propanol	D	750	399
1-Propanol	D	775	413
Propionaldehyde	C	405	207
Propionic Acid	D	870	466
Propionic Anhydride	D	545	285
N-Propyl Acetate	D	842	450
N-Propyl Ether	C	419	215
Propyl Nitrate	B	347	175
Propylene	D	851	455
Propylene Dichloride	D	1035	537
Propylene Oxide	B (C)	840	449
Pyridine	D	900	482
Styrene	D	914	490
Tetrahydrofuran	C	610	321
Tetrahydronaphthalene	D	725	385
Toluene	D	896	480
Turpentine	D	488	253
Unsymmetrical Dimethyl Hydrazine (Udmh)	C	480	249
Valeraldehyde	C	432	222
Vinyl Acetate	D	756	402
Vinyl Chloride	D	882	472
Vinyl Toluene	D	921	494
Vinylidene Chloride	D	1058	570
Xylenes	D	867-984	464-529