

Ignition temperatures

Group classifications

Ignition temperatures and group classifications for flammable gases and vapors

| Material | Group | Autoignition temperature | | Material | Group | Autoignition temperature | |
|------------------------------|-------|--------------------------|---------|---|-------|--------------------------|---------|
| | | ° F | ° C | | | ° F | ° C |
| Acetaldehyde | C | 347 | 175 | Di-N-Propylamine | C | 570 | 299 |
| Acetic acid | D | 867 | 464 | Diacetone alcohol | D | 1118 | 603 |
| Acetic anhydride | D | 600 | 316 | O-Dichlorobenzene | D | 1198 | 647 |
| Acetone | D | 869 | 465 | 1.1-Dichloroethane | D | 820 | 438 |
| Acetone cyanohydrin | D | 1270 | 688 | 1.2-Dichloroethylene | D | 860 | 460 |
| Acetonitrile | D | 975 | 524 | Dicyclopentadiene | C | 937 | 503 |
| Acetylene | A | 581 | 305 | Diethyl benzene | D | 743–842 | 395–450 |
| Acrolein (inhibited) | B (c) | 455 | 285 | Diethyl ether | C | 320 | 160 |
| Acrylic acid | D | 820 | 438 | Diethylamine | C | 594 | 312 |
| Acrylonitrile | D | 898 | 481 | Diethylene glycol monobutyl ether | C | 442 | 228 |
| Allyl alcohol | C | 713 | 378 | Diethylene glycol monomethyl ether | C | 465 | 241 |
| Allyl chloride | D | 905 | 485 | N-N-Dimethyl aniline | C | 700 | 371 |
| Alpha-methyl styrene | D | 1066 | 574 | Dimethyl formamide | D | 833 | 455 |
| Ammonia | D | 928 | 498 | Dimethyl sulfate | D | 370 | 188 |
| N-Amyl acetate | D | 680 | 360 | Dimethylamine | C | 752 | 400 |
| Aniline | D | 1139 | 615 | 1,4-Dioxane | C | 356 | 180 |
| Benzene | D | 928 | 498 | Dipentene | D | 458 | 237 |
| Benzyl chloride | D | 1085 | 1085 | Dodecene | D | 491 | 255 |
| 1.3-Butadiene | B (d) | 788 | 420 | Du-isopropylamine | C | 600 | 316 |
| Butane | D | 550 | 288 | Epichlorohydrin | C | 772 | 411 |
| 1-Butanol | D | 650 | 343 | Ethane | D | 882 | 472 |
| 2-Butanol | D | 761 | 405 | Ethanol | D | 685 | 363 |
| N-Butyl acetate | D | 790 | 421 | Ethyl acetate | D | 800 | 427 |
| N-Butyl acrylate (inhibited) | D | 559 | 293 | Ethyl acetate (inhibited) | D | 702 | 372 |
| Butylamine | D | 594 | 312 | Ethyl benzene | D | 810 | 432 |
| Butylene | D | 725 | 385 | Ethyl chloride | D | 966 | 519 |
| N-Butyraldehyde | C | 425 | 218 | Ethyl formate | D | 851 | 455 |
| N-Butyric acid | D | 830 | 443 | 2-Ethyl hexanol | D | 448 | 231 |
| Carbon disulfide | * | 194 | 90 | 2-Ethyl hexyl acrylate | D | 485 | 252 |
| Carbon monoxide | C | 1128 | 609 | Ethyl mercaptan | C | 572 | 300 |
| Chlorobenzene | D | 1099 | 593 | Ethylamine | D | 725 | 385 |
| Cresol | D | 1038–1110 | 559–599 | Ethylene | C | 842 | 450 |
| Crotonaldehyde | C | 450 | 232 | Ethylene chlorohydrin | D | 797 | 425 |
| Cumene | D | 795 | 424 | Ethylene dichloride | D | 775 | 413 |
| Cyclohexane | D | 473 | 245 | Ethylene glycol monobutyl ether | C | 460 | 238 |
| Cyclohexanol | D | 572 | 300 | Ethylene glycol monobutyl ether acetate | C | 645 | 340 |
| Cyclohexanone | D | 473 | 245 | Ethylene glycol monoethyl ether | C | 455 | 235 |
| Cyclohexene | D | 471 | 244 | Ethylene glycol monoethyl ether acetate | C | 715 | 379 |
| Cyclopropane | D | 938 | 503 | Ethylene glycol monomethyl ether | D | 545 | 285 |
| P-Cymene | D | 817 | 436 | Ethylene oxide | B (C) | 804 | 429 |
| N-Decanol | D | 550 | 288 | Ethylenediamine | D | 725 | 385 |
| Decene | D | 455 | 235 | Ethylenimine | C | 608 | 320 |
| Di-isobutyl ketone | D | 745 | 396 | 2-Ethylehexaldehyde | C | 375 | 191 |
| Di-isobutylene | D | 736 | 391 | Formaldehyde (gas) | B | 795 | 429 |

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

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| Fuel oils | D | 410–765 | 210–407 | Monoethanolamine | D | 770 | 410 |
| Furfural | C | 600 | 316 | Monoisopropanolamine | D | 705 | 374 |
| Furfuryl alcohol | C | 915 | 490 | Monomethyl aniline | C | 900 | 482 |
| Gasoline | D | 536–880 | 280–471 | Monomethyl hydrazine | C | 382 | 194 |
| Heptane | D | 399 | 204 | Morpholine | C | 590 | 310 |
| Heptene | D | 500 | 260 | Naphtha (coal tar) | D | 531 | 277 |
| Hexane | D | 437 | 225 | Naphtha (petroleum) | D | 550 | 288 |
| 2-Hexanone | D | 795 | 424 | Nitrobenzene | D | 900 | 482 |
| Hexenes | D | 473 | 245 | Nitroethane | C | 778 | 414 |
| Hydrazine | C | 74–518 | 23–270 | Nitromethane | C | 785 | 418 |
| Hydrogen | B | 968 | 520 | 2-Nitropropane | C | 802 | 428 |
| Hydrogen cyanide | C | 1000 | 538 | 1-Nitropropane | C | 789 | 421 |
| Hydrogen sulfide | C | 500 | 260 | Nonane | D | 401 | 205 |
| Iso-Butyl acetate | D | 790 | 421 | Octane | D | 403 | 206 |
| Iso-Octyl aldehyde | C | 387 | 197 | Octene | D | 446 | 230 |
| Isoamyl acetate | D | 680 | 360 | Pentane | D | 470 | 243 |
| Isoamyl alcohol | D | 662 | 350 | 1-Pentanol | D | 572 | 300 |
| Isobutyl acrylate | D | 800 | 427 | 2-Pentanone | D | 846 | 452 |
| Isobutyraldehyde | C | 385 | 196 | 1-Pentene | D | 527 | 275 |
| Isophorone | D | 860 | 460 | Propane | D | 842 | 450 |
| Isoprene | D | 428 | 220 | 2-Propanol | D | 750 | 399 |
| Isopropyl acetate | D | 860 | 460 | 1-Propanol | D | 775 | 413 |
| Isopropyl ether | D | 830 | 443 | Propionaldehyde | C | 405 | 207 |
| Isopropylamine | D | 756 | 402 | Propionic acid | D | 870 | 466 |
| Kerosene | D | 410 | 210 | Propionic anhydride | D | 545 | 285 |
| Liquified petroleum gas | D | 761–842 | 405–450 | N-Propyl acetate | D | 842 | 450 |
| Mesityl oxide | D | 652 | 344 | N-Propyl ether | C | 419 | 215 |
| Methane | D | 999 | 537 | Propyl nitrate | B | 347 | 175 |
| Methanol | D | 725 | 385 | Propylene | D | 851 | 455 |
| Methyl acetate | D | 850 | 454 | Propylene dichloride | D | 1035 | 537 |
| Methyl acrylate | D | 875 | 468 | Propylene oxide | B (C) | 840 | 449 |
| Methyl ether | C | 662 | 350 | Pyridine | D | 900 | 482 |
| Methyl ethyl ketone | D | 759 | 404 | Styrene | D | 914 | 490 |
| Methyl formal | C | 460 | 238 | Tetrahydrofuran | C | 610 | 321 |
| Methyl formate | D | 840 | 449 | Tetrahydronaphthalene | D | 725 | 385 |
| Methyl isobutyl ketone | D | 840 | 449 | Toluene | D | 896 | 480 |
| Methyl isocyanate | D | 994 | 534 | Turpentine | D | 488 | 253 |
| Methyl methacrylate | D | 792 | 422 | Unsymmetrical dimethyl hydrazine (UDMH) | C | 480 | 249 |
| Methyl N-Amyl ketone | D | 740 | 393 | Valeraldehyde | C | 432 | 222 |
| 2-Methyl-1-Propanol | D | 780 | 416 | Vinyl acetate | D | 756 | 402 |
| 2-Methyl-2-Propanol | D | 892 | 478 | Vinyl chloride | D | 882 | 472 |
| Methylamine | D | 806 | 430 | Vinyl toluene | D | 921 | 494 |
| Methylcyclohexane | D | 482 | 250 | Vinylidene chloride | D | 1058 | 570 |
| Methylcyclohexanol | D | 565 | 296 | Xylenes | D | 867–984 | 464–529 |