

SRS Tech Note

Gases measured by the BGA244

The BGA244 Binary Gas Analyzer can measure the ratio of gases in a two gas (binary) mixture. It does this by measuring the speed of sound in the gas and then calculating the ratio that would give that speed of sound. These calculations require over 40 different parameters to accurately characterize the behavior of each gas.

The BGA244 Factory Gas Table contains this data for about 500 different gases. These include nearly all of the industrial gases, plus most hydrocarbons, refrigerants, specialty gases and semiconductor processing gases. In addition, there are hundreds of less commonly used gases. This large list of gases allows the BGA244 to make measurements on tens of thousands of different mixtures. Unlike most other measurement solutions, no customization or local span calibration is required for any gas combination.

The Factory Gas Table is contained within the BGA244's internal memory. Gases can be easily selected or changed at any time. This can be done directly with the BGA244's touch screen LCD, with the provided BGAMon software or over any of the three computer interfaces. In the rare case that a gas isn't contained in the Factory Gas Table, the BGA244 supports user entered gases. This allows for a nearly unlimited number of gases that can be measured. See the BGA244 Manual for details on selecting gases from the Factory Gas Table or entering user gases.

The complete BGA244 Factory Gas Table is listed starting on the following page. Gases are listed by order of increasing molecular weight. Each entry includes a preferred name, up to two alternate names, the Hill system formula, CAS Registry Number and molecular mass.

®CAS Registry Number is a Registered Trademark of the American Chemical Society.



Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Hydrogen, normal	Normal hydrogen		H2	1333-74-0n	2.01588
Hydrogen, ortho	Ortho hydrogen		H2	1333-74-0o	2.01588
Hydrogen, para	Para hydrogen		H2	1333-74-0p	2.01588
Hydrogen			H2	1333-74-0	2.01588
Helium-3	He-3		He-3	14762-55-1	3.01603
Deuterium hydride			DH	13983-20-5	3.022
Helium	Helium-4		He	7440-59-7	4.002602
Deuterium			D2	7782-39-0	4.0282
Methane	R-50	Carbon tetrahydride	CH4	74-82-8	16.0428
Ammonia	Nitrogen trihydride	NH3	H3N	7664-41-7	17.03026
Water	Dihydrogen Monoxide		H2O	7732-18-5	18.015268
Hydrogen fluoride			HF	7664-39-3	20.006
Heavy Water	Deuterated Water		D2O	7789-20-0	20.027508
Neon			Ne	7440-01-9	20.179
Ethyne	Acetylene		C2H2	74-86-2	26.037
Hydrogen cyanide			CHN	74-90-8	27.025
Diborane	Boroethane	B2H6	H6B2	19287-45-7	27.67
Carbon monoxide	Carbon oxide		CO	630-08-0	28.0101
Nitrogen			N2	7727-37-9	28.01348
Ethylene	Dicarbene	Ethene	C2H4	74-85-1	28.05376
Air, dry			N2-O2-Ar	132259-10-0	28.96
Nitrogen oxide	Nitrogen monoxide	Nitric oxide	NO	10102-43-9	30.006
Formaldehyde			CH2O	50-00-0	30.026
Ethane			C2H6	74-84-0	30.06904
Methanamine	Aminomethane	Methylamine	CH5N	74-89-5	31.057
Oxygen			O2	7782-44-7	31.9988
Methanol	Methyl alcohol		CH4O	67-56-1	32.04216
Hydrazine			H4N2	302-01-2	32.045
Fluoromethane	R-41	Methyl fluoride	CH3F	593-53-3	34.033
Hydrogen sulfide			H2S	7783-06-4	34.08088
Hydrogen chloride			HCl	7647-01-0	36.461
Fluorine			F2	7782-41-4	37.99681
Argon			Ar	7440-37-1	39.948
1,2-Propadiene	Allene	Propadiene	C3H5	463-49-0	40.064
1-Propyne	Prop-1-yne	Methyl acetylene	C3H4	74-99-7	40.06
Acetonitrile			C2H3N	75-05-8	41.052
1-Propene	Prop-1-ene	Propylene	C3H6	115-07-1	42.07974
Cyclopropane	Trimethylene		C3H6	75-19-4	42.081
Ethyleneimine			C2H5N	151-56-4	43.068
Carbon dioxide	R-744	Carbonyl oxide	CO2	124-38-9	44.0098
Dinitrogen monoxide	R-744A	Nitrous oxide	N2O	10024-97-2	44.0128
Acetaldehyde			C2H4O	75-07-0	44.053
Ethylene oxide			C2H4O	75-21-8	44.053
Propane	Dimethylmethane		C3H8	74-98-6	44.09562
Formamide			CH3NO	75-12-7	45.041
N-Methylmethanamine	N,N-Dimethylamine	Dimethylamine	C2H7N	124-40-3	45.084
Ethanamine	Aminoethane	Ethylamine	C2H7N	75-04-7	45.084
Formic acid	Methanoic acid		CH2O2	64-18-6	46.026
Methoxymethane	1,1'-Oxybismethane	Dimethyl ether	C2H6O	115-10-6	46.06844
Ethanol	Ethyl alcohol		C2H6O	64-17-5	46.06844
Methylsilane			CH6Si	992-94-9	46.144
Ozone	Triatomic oxygen		O3	10028-15-6	47.998
Fluoroethane	R-161	Ethyl fluoride	C2H5F	353-36-6	48.06
Methanethiol	Methylsulfide	Methyl mercaptan	CH4S	74-93-1	48.107

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Chloromethane	R-40	Methyl chloride	CH3Cl	74-87-3	50.488
Difluoromethane	R-32	methylene fluoride	CH2F2	75-10-5	52.024
Cyanogen			C2N2	460-19-5	52.035
Vinyl acetylene			C4H4	689-97-4	52.075
Acrylonitrile			C3H3N	107-13-1	53.063
1,3-Butadiene	Butadiene		C4H6	106-99-0	54.09
1-Butyne	Ethylacetylene	But-1-yne	C4H6	107-00-6	54.09
Dimethyl acetylene			C4H6	503-17-3	54.09
1,2-Butadiene			C4H6	590-19-2	54.09
1,2-Oxazole	1-oxa-2-azacyclopentadiene	Isoxazole	C3H3NO	288-14-2	55.058
Propionitrile			C3H5N	107-12-0	55.079
Acrolein			C3H4O	107-02-8	56.063
1-Butene	Butylene		C4H8	106-98-9	56.10632
2-Methyl-1-propene	2-Methylpropene	Isobutene	C4H8	115-11-7	56.10632
Cyclobutane	Tetramethylene		C4H8	287-23-0	56.106
(2Z)-2-Butene	cis-2-Butene	Z-2-Butene	C4H8	590-18-1	56.10632
(2E)-2-Butene	E-2-butene	trans-2-Butene	C4H8	624-64-6	56.10632
Methyl Isocyanate			C2H3NO	624-83-9	57.051
Methyl vinyl ether			C3H6O	107-25-5	58.079
Propionaldehyde			C3H6O	123-38-6	58.079
Acetone	dimethyl ketone	2-Propanone	C3H6O	67-64-1	58.07914
Butane	n-Butane		C4H10	106-97-8	58.1222
Isobutane	i-Butane	2-Methylpropane	C4H10	75-28-5	58.1222
Acetamide			C2H5NO	60-35-5	59.067
1-Propanamine	1-Aminopropane	n-Propyl Amine	C3H9N	107-10-8	59.11
2-Propaneamine	2-Aminopropane	Isopropyl amine	C3H9N	75-31-0	59.11
N,N-Dimethylmethanamine	Trimethylamine		C3H9N	75-50-3	59.11
Methyl formate	Methyl methanoate		C2H4O2	107-31-3	60.052
Acetic acid			C2H4O2	64-19-7	60.052
carbonyl sulfide	carbon oxide sulfide		COS	463-58-1	60.0751
Methoxyethane	Methyl ethyl ether	Methylethyl ether	C3H8O	540-67-0	60.095
2-Propanol	Isopropyl alcohol	Isopropanol	C3H8O	67-63-0	60.095
1-Propanol	Propyl alcohol	Propan-1-ol	C3H8O	71-23-8	60.095
Ethylenediamine			C2H8N2	107-15-3	60.098
Dimethylsilane			C2H8Si	1111-74-6	60.17
Nitromethane	nitrocarbol		CH3NO2	75-52-5	61.04
Ethylene glycol			C2H6O2	107-21-1	62.068
Ethanethiol	Thioethanol	Ethyl mercaptan	C2H6S	75-08-1	62.134
Methylthiomethane	Thiobismethane	Dimethyl sulfide	C2H6S	75-18-3	62.134
Vinyl chloride			C2H3Cl	75-01-4	62.498
1,1-Difluoroethene	R-1132A	1,1-Difluoroethylene	C2H2F2	75-38-7	64.035
Sulfur dioxide		SO2	O2S	7446-09-5	64.0638
Chloroethane	1-Chloroethane	Ethyl chloride	C2H5Cl	75-00-3	64.514
1,2-Difluoroethane			C2H4F2	624-72-6	66.05
1,1-Difluoroethane	R-152a	Algofrene 67	C2H4F2	75-37-6	66.051
2-Methyl -1-butene-3-yne			C5H6	78-80-8	66.101
1H-Pyrrole	Azole	Pyrrole	C4H5N	109-97-7	67.09
Furan	1,4-Epoxy-1,3-butadiene		C4H4O	110-00-9	68.074
Cyclopentene			C5H8	142-29-0	68.117
3-Methyl-1-butyne			C5H8	598-23-2	68.117
3-Methyl-1,2-butadiene			C5H8	598-25-4	68.117
1-Pentyne	Ethylmethylacetylene	Pent-1-yne	C5H8	627-19-0	68.117

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
2-Pentyne			C5H8	627-21-4	68.117
Butyronitrile			C4H7N	109-74-0	69.105
Fluoroform	R-23	Trifluoromethane	CHF3	75-46-7	70.01385
1-Pentene	cis-Pentene	Pent-1-ene	C5H10	109-67-1	70.133
Cyclopentane	Pentamethylene		C5H10	287-92-3	70.133
2-Methyl-2-butene	2-Methylbut-2-ene	Amylene	C5H10	513-35-9	70.133
2-Methyl-1-butene			C5H10	563-46-2	70.133
3-Methyl-1-butene	Methylethylethylene	3-Methylbut-1-ene	C5H10	563-45-1	70.134
(2Z)-2-Pentene	cis-2-Pentene	Z-2-Pentene	C5H10	627-20-3	70.134
Chlorine			Cl2	7782-50-5	70.906
Nitrogen trifluoride			F3N	7783-54-2	71.019
Acrylic acid			C3H4O2	79-10-7	72.063
Trimethylaluminium	TMA	Aluminum trimethanide	C3H9Al	75-24-1	72.085
Tetrahydrofuran	Butylene oxide	Diethylene oxide	C4H8O	109-99-9	72.106
Butyraldehyde			C4H8O	123-72-8	72.106
Methylethyl ketone	Butanone	MEK	C4H8O	78-93-3	72.106
Neopentane	Dimethylpropane	2,2-Dimethylpropane	C5H12	463-82-1	72.14878
Pentane	n-Pentane		C5H12	109-66-0	72.14878
Isopentane	2-Methyl butane		C5H12	78-78-4	72.14878
N,N-Dimethyl formamide			C3H7NO	68-12-2	73.094
N-Methyl acetamide			C3H7NO	79-16-3	73.094
N-Ethylethanamine	N,N-Diethylamine	Diethylamine	C4H11N	109-89-7	73.137
1-Butanamine			C4H11N	109-73-9	73.138
2-Methyl-1-propanamine	Isopropylmethyl amine	Isobutylamine	C4H11N	78-81-9	73.138
Ethyl formate	Ethyl methanoate	Ethyl ester of formic acid	C3H6O2	109-94-4	74.079
Propionic acid			C3H6O2	79-09-4	74.079
Methyl acetate	Methyl ethanoate		C3H6O2	79-20-9	74.079
Methylpropyl ether			C4H10O	557-17-5	74.122
Methylisopropyl ether			C4H10O	598-53-8	74.122
Ethoxyethane	1,1'-Oxybisethane	Diethyl ether	C4H10O	60-29-7	74.122
1-Butanol	Propylmethanol	1-Butyl alcohol	C4H10O	71-36-3	74.122
2-Methyl-2-propanol	ter-Butyl alcohol	tert-Butanol	C4H10O	75-65-0	74.122
2-Butanol	Methyl-2-propanol	sec-Butanol	C4H10O	78-92-2	74.122
2-Methyl-1-propanol	2-Methylpropanol	Isobutanol	C4H10O	78-83-1	74.123
Nitroethane			C2H5NO2	79-24-3	75.067
1,2-Propylene glycol			C3H8O2	57-55-6	76.094
Carbon disulfide			CS2	75-15-0	76.141
Propyl mercaptan			C3H8S	107-03-9	76.161
Methylethyl sulfide			C3H8S	624-89-5	76.161
2-Propyl mercaptan			C3H8S	75-33-2	76.161
Germane			GeH4	7782-65-2	76.642
Arsine	AsH3		H3As	7784-42-1	77.945
Benzene	1,3,5-Cyclohexatriene	Cyclohex-1,3,5-triene	C6H6	71-43-2	78.11184
Dimethyl sulfoxide			C2H6OS	67-68-5	78.133
1-Chloropropane	Propyl chloride		C3H7Cl	540-54-5	78.541
2-Chloropropane			C3H7Cl	75-29-6	78.541
Pyridine	Azabenzene		C5H5N	110-86-1	79.101
Sulfur trioxide			O3S	7446-11-9	80.063
Methylchlorosilane			CH5ClSi	993-00-0	80.589
Hydrogen bromide	Bromane	HBr	BrH	10035-10-6	80.912
2-Methylfuran	Methylfuran	Sylvan	C5H6O	534-22-5	82.102
Cyclohexene			C6H10	110-83-8	82.144

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
3-Methylcyclopentene			C6H10	1120-62-3	82.144
1-Hexyne			C6H10	693-02-7	82.144
1-Methylcyclopentene			C6H10	693-89-0	82.144
2-Hexyne			C6H10	764-35-2	82.144
3-Hexyne			C6H10	928-49-4	82.144
Krypton			Kr	7439-90-9	83.798
1,1,1-Trifluoroethane	R-143a	Freon 143a	C2H3F3	420-46-2	84.041
1,1,2-Trifluoroethane	R-143		C2H3F3	430-66-0	84.041
Cyclopentanone			C5H8O	120-92-3	84.118
Thiophene	Thiofuran		C4H4S	110-02-1	84.14
Cyclohexane			C6H12	110-82-7	84.15948
1-Hexene	Hex-1-ene	Hexene	C6H12	592-41-6	84.159
Methylcyclopentane			C6H12	96-37-7	84.159
4-Methyl-1-pentene	4-Methylpent-1-ene		C6H12	691-37-2	84.15948
Dichloromethane	Methane dichloride	Methylene chloride	CH2Cl2	75-09-2	84.933
Vinyl acetate			C4H6O2	108-05-4	86.089
Methacrylic acid			C4H6O2	79-41-4	86.089
Methyl acrylate			C4H6O2	96-33-3	86.089
2-Pentanone	Pentan-2-one	Methyl propyl ketone	C5H10O	107-87-9	86.132
Pentanal			C5H10O	110-62-3	86.132
3-Methyl-2-butanone	3-Methyl butanone	Methyl isopropyl ketone	C5H10O	563-80-4	86.132
3-Pentanone	Diethyl ketone	Metacetone	C5H10O	96-22-0	86.132
2-Methylpentane	1,1-Dimethylbutane	Isohexane	C6H14	107-83-5	86.17536
Hexane	n-Hexane		C6H14	110-54-3	86.17536
2,3-Dimethylbutane	Diisopropyl	Biisopropyl	C6H14	79-29-8	86.175
2,2-Dimethylbutane	Neohexane		C6H14	75-83-2	86.17536
3-Methylpentane			C6H14	96-14-0	86.177
Chloro(difluoro)methane	R-22	Chlorodifluoromethane	CHClF2	75-45-6	86.468
Tetrafluoromethane	R-14	carbon tetrafluoride	CF4	75-73-0	88.01
Butyric acid			C4H8O2	107-92-6	88.105
Propyl formate	Propyl methanoate	n-Propyl methanoate	C4H8O2	110-74-7	88.105
1,4-Dioxane			C4H8O2	123-91-1	88.105
Ethyl acetate	Acetic ester	Ethyl ethanoate	C4H8O2	141-78-6	88.105
Methyl propionate			C4H8O2	554-12-1	88.105
Isobutyric acid			C4H8O2	79-31-2	88.105
1,3-Dioxane			C4H8O2	505-22-6	88.106
3-Methyl-1-butanol			C5H12O	123-51-3	88.148
Methyl tert-butyl ether	MTBE	tert-Butyl methyl ether	C5H12O	1634-04-4	88.148
2-Pentanol			C5H12O	6032-29-7	88.148
Methylisobutyl ether			C5H12O	625-44-5	88.148
Ethylisopropyl ether			C5H12O	625-54-7	88.148
Methylbutyl ether			C5H12O	628-28-4	88.148
Ethylpropyl ether			C5H12O	628-32-0	88.148
1-Pentanol	n-Amyl alcohol	Pentanol	C5H12O	71-41-0	88.148
2-Methyl-2-butanol	tert-Amyl Alcohol	2-Methylbutan-2-ol	C5H12O	75-85-4	88.15
Tetrahydrothiophene			C4H8S	110-01-0	88.171
Oxalic acid			C2H2O4	144-62-7	90.035
1,3-Butanediol			C4H10O2	107-88-0	90.121
1,1-Dimethoxyethane			C4H10O2	534-15-6	90.121
1,2-Butanediol			C4H10O2	584-03-2	90.121
Butyl mercaptan			C4H10S	109-79-5	90.187
Methylisopropyl sulfide			C4H10S	1551-21-9	90.187
Diethyl sulfide	ethyl sulfide	1,1-Thiobisethane	C4H10S	352-93-2	90.187

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Methylpropyl sulfide			C4H10S	3877-15-4	90.187
sec-Butyl mercaptan			C4H10S	513-53-1	90.187
Methylbenzene	Toluene		C7H8	108-88-3	92.13842
2-Chlorobutane	1-Methylpropyl chloride	sec-Butyl chloride	C4H9Cl	78-86-4	92.568
4-Methylpyridine	4-Methylazine	4-Picoline	C6H7N	108-89-4	93.128
3-Methylpyridine	3-Mepy	3-Picoline	C6H7N	108-99-6	93.128
2-Methylpyridine	2-Picoline		C6H7N	109-06-8	93.128
Aniline	1-Aminobenzene	Benzenamine	C6H7N	62-53-3	93.128
Phenol	Benzenol	Hydroxybenzene	C6H6O	108-95-2	94.111
Dimethyl disulfide			C2H6S2	624-92-0	94.199
Bromomethane			CH3Br	74-83-9	94.939
Dimethylzinc	Zinc dimethanide	DMZn	C2H6Zn	544-97-8	95.478
Fluorobenzene			C6H5F	462-06-6	96.102
1-Heptyne			C7H12	628-71-7	96.17
Cyclohexanone			C6H10O	108-94-1	98.143
Methylcyclohexane			C7H14	108-87-2	98.186
Ethylcyclopentane			C7H14	1640-89-7	98.186
1-Heptene	Heptylene	Hept-1-ene	C7H14	592-76-7	98.186
(1R,3R)-1,3-Dimethylcyclopentane	1,trans-3-Dimethylcyclopentane	trans-1,3-Dimethylcyclopentane	C7H14	1759-58-6	98.188
(1R,3S)-1,3-Dimethylcyclopentane	cis-1,3-Dimethylcyclopentane		C7H14	2532-58-3	98.188
1,2-Dichloroethane	1,2-DCE	1,2-Ethylene dichloride	C2H4Cl2	107-06-2	98.959
1,1-Dichloroethane	1,1-DCE		C2H4Cl2	75-34-3	98.959
Tetrafluoroethene	1,1,2,2-Tetrafluoroethylene	Perfluoroethylene	C2F4	116-14-3	100.016
Methyl methacrylate			C5H8O2	80-62-6	100.116
Methylisobutyl ketone			C6H12O	108-10-1	100.159
Cyclohexanol	Cyclohexyl Alcohol	1-Cyclohexanol	C6H12O	108-93-0	100.159
Ethylisopropyl ketone			C6H12O	565-69-5	100.159
3-Hexanone	Hexan-3-one		C6H12O	589-38-8	100.159
2-Hexanone	Butyl methyl ketone	Hexan-2-one	C6H12O	591-78-6	100.159
Hexanal			C6H12O	66-25-1	100.159
2,4-Dimethylpentane	Diisopropylmethane		C7H16	108-08-7	100.202
Heptane	n-Heptane		C7H16	142-82-5	100.202
2,2,3-Trimethylbutane	Triptane	Pentamethylethane	C7H16	464-06-2	100.202
3,3-Dimethylpentane			C7H16	562-49-2	100.202
2,3-Dimethylpentane	Ethylisopropylmethyl methane		C7H16	565-59-3	100.202
3-Methylhexane	2-Ethylpentane		C7H16	589-34-4	100.202
2,2-Dimethylpentane			C7H16	590-35-2	100.202
2-Methylhexane	Isoheptane		C7H16	591-76-4	100.202
3-Ethylpentane			C7H16	617-78-7	100.202
1-Chloro-1,1-difluoroethane	R-142b	1,1-Difluoro-1-chloroethane	C2H3ClF2	75-68-3	100.49503
Di-isopropyl amine			C6H15N	108-18-9	101.19
N,N-Diethylethanamine	TEA	Triethylamine	C6H15N	121-44-8	101.19
Dipropyl amine			C6H15N	142-84-7	101.19
1,1,2,2-Tetrafluoroethane	R-134	a,w-Dihydro perfluoroethane	C2H2F4	359-35-3	102.032
1,1,1,2-Tetrafluoroethane	R-134a	Tetrafluoroethane	C2H2F4	811-97-2	102.032
Acetic anhydride			C4H6O3	108-24-7	102.089
Ethyl propionate			C5H10O2	105-37-3	102.132

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Pentanoic acid			C5H10O2	109-52-4	102.132
Propyl acetate	Propyl ethanoate	n-Propyl ethanoate	C5H10O2	109-60-4	102.132
2-Methylbutanoic acid			C5H10O2	116-53-0	102.132
Methyl butyrate			C5H10O2	623-42-7	102.132
Di-isopropyl ether			C6H14O	108-20-3	102.175
1-Hexanol	Caproic alcohol	Hexyl alcohol	C6H14O	111-27-3	102.175
2-Hexanol			C6H14O	626-93-7	102.175
Methyl pentyl ether			C6H14O	628-80-8	102.175
Dichloro(fluoro)methane	R-21	Dichlorofluoromethane	CHCl2F	75-43-4	102.92
Benzonitrile			C7H5N	100-47-0	103.121
Malonic acid			C3H4O4	141-82-2	104.061
Silicon tetrafluoride		SiF4	F4Si	7783-61-1	104.079
1,2-Dimethoxypropane			C5H12O2	7778-85-0	104.148
Styrene			C8H8	100-42-5	104.149
Pentyl mercaptan			C5H12S	110-66-7	104.214
2-Pentyl mercaptan			C5H12S	2084-19-7	104.214
Methylbutyl sulfide			C5H12S	628-29-5	104.214
Chloro(trifluoro)methane	R-13	Trifluorochloro methane	CClF3	75-72-9	104.459
Diethanol amine			C4H11NO2	111-42-2	105.136
Ethylbenzene			C8H10	100-41-4	106.165
p-Xylene	1,4-Xylene	1,4-Dimethylbenzene	C8H10	106-42-3	106.165
m-Xylene	1,3-Xylene	1,3-Dimethylbenzene	C8H10	108-38-3	106.165
o-Xylene	ortho-Xylene	1,2-Dimethylbenzene	C8H10	95-47-6	106.165
2,4-Dimethylpyridine	2,4-Lutidine		C7H9N	108-47-4	107.155
2,6-Dimethylpyridine	2,6-Lutidine		C7H9N	108-48-5	107.155
3,4-Dimethylpyridine	3,4-Lutidine		C7H9N	583-58-4	107.155
2,3-Dimethylpyridine	2,3-Lutidine		C7H9N	583-61-9	107.155
2,5-Dimethylpyridine	2,5-Lutidine	5-methyl-2-methylpyridine	C7H9N	589-93-5	107.155
3,5-Dimethylpyridine	3,5-Lutidine		C7H9N	591-22-0	107.155
Sulfur tetrafluoride	Tetrafluoro-λ4-sulfane	SF4	F4S	7783-60-0	108.06
Quinone			C6H4O2	106-51-4	108.095
Benzyl alcohol			C7H8O	100-51-6	108.138
Anisole			C7H8O	100-66-3	108.138
p-Cresol	4-Methylphenol	4-Hydroxytoluene	C7H8O	106-44-5	108.138
m-Cresol	3-Methylphenol	1-Hydroxy-3-methylbenzene	C7H8O	108-39-4	108.138
o-Cresol	2-Methylphenol	2-Hydroxytoluene	C7H8O	95-48-7	108.138
Bromoethane			C2H5Br	74-96-4	108.965
Benzenethiol			C6H6S	108-98-5	110.177
1-Octyne			C8H14	629-05-0	110.197
cis-1,2-Dimethylcyclohexane			C8H16	2207-01-4	112.213
1-Octene	Octene		C8H16	111-66-0	112.213
Ethylcyclohexane			C8H16	1678-91-7	112.213
1,1-Dimethylcyclohexane			C8H16	590-66-9	112.213
trans-1,2-Dimethylcyclohexane			C8H16	6876-23-9	112.213
Cyclooctane			C8H16	292-64-8	112.215
Chlorobenzene	Phenyl chloride	Benzyl chloride	C6H5Cl	108-90-7	112.557
1,2-Dichloropropane	Propylene dichloride		C3H6Cl2	78-87-5	112.986
1,1-Dichloropropane			C3H6Cl2	78-99-9	112.986
3-Heptanone			C7H14O	106-35-4	114.185

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
2-Heptanone			C7H14O	110-43-0	114.185
Heptanal			C7H14O	111-71-7	114.185
Di-isopropyl ketone			C7H14O	565-80-0	114.185
1-Methylcyclohexanol			C7H14O	590-67-0	114.185
trans-2-Methylcyclohexanol			C7H14O	7443-52-9	114.185
cis-2-Methylcyclohexanol			C7H14O	7443-70-1	114.185
Octane	n-Octane		C8H18	111-65-9	114.229
2,2,4-Trimethylpentane	Isooctane (trimethylpentane)		C8H18	540-84-1	114.229
2,3,3-Trimethylpentane			C8H18	560-21-4	114.229
3,3-Dimethylhexane			C8H18	563-16-6	114.229
2,2,3-Trimethylpentane			C8H18	564-02-3	114.229
3,4-Dimethylhexane			C8H18	583-48-2	114.229
2,3-Dimethylhexane			C8H18	584-94-1	114.229
2,4-Dimethylhexane			C8H18	589-43-5	114.229
4-Methylheptane			C8H18	589-53-7	114.229
2,2-Dimethylhexane			C8H18	590-73-8	114.229
2,5-Dimethylhexane	Diisobutane		C8H18	592-13-2	114.229
2-Methylheptane	i-Octane	Isooctane (methylheptane)	C8H18	592-27-8	114.229
2,2,3,3-Tetramethylbutane	Hexamethylethane		C8H18	594-82-1	114.229
3-Ethyl-2-methylpentane	2-Methyl-3-ethylpentane		C8H18	609-26-7	114.229
3-Ethylhexane			C8H18	619-99-8	114.229
Trimethylgallium	TMGa	Me3Ga	C3H9Ga	1445-79-0	114.827
Methyldichlorosilane			CH4Cl2Si	75-54-7	115.034
Ethyl butyrate			C6H12O2	105-54-4	116.158
Butyl acetate			C6H12O2	123-86-4	116.158
Hexanoic acid			C6H12O2	142-62-1	116.158
2-Ethyl butanoic acid			C6H12O2	88-09-5	116.158
1-Heptanol	1-Hydroxyheptane	Heptan-1-ol	C7H16O	111-70-6	116.201
2-Heptanol			C7H16O	543-49-7	116.201
Cyclohexyl mercaptan			C6H12S	1569-69-3	116.224
1,1-Dichloro-1-fluoroethane	R-141b	Dichlorofluoroethane	C2H3Cl2F	1717-00-6	116.94962
Succinic acid			C4H6O4	110-15-6	118.088
Ethyl (2S)-2-hydroxypropanoate	Ethyl lactate		C5H10O3	687-47-8	118.133
alpha-Methyl styrene			C9H10	98-83-9	118.176
Hexyl mercaptan			C6H14S	111-31-9	118.24
Phenyl isocyanate			C7H5NO	103-71-9	119.121
Chloroform	R-20	Trichloromethane	CHCl3	67-66-3	119.378
1,1,1,2,2-Pentafluoroethane	R-125	Pentafluoroethane	C2HF5	354-33-6	120.0214
Propylbenzene	n-Propylbenzene		C9H12	103-65-1	120.192
1,2,3-Trimethylbenzene	Trimethylbenzene		C9H12	526-73-8	120.192
1,2,4-Trimethylbenzene	pseudocumene	Pseudocumene	C9H12	95-63-6	120.192
1-methylethyl benzene	2-Phenylpropane	Cumene	C9H12	98-82-8	120.192
Mesitylene	Sym-Trimethylbenzene	1,3,5-Trimethylbenzene	C9H12	108-67-8	120.194
1-Ethyl-4-methylbenzene	1,4-Methylethylbenzene	4-Ethyltoluene	C9H12	622-96-8	120.194
Dichloro(difluoro)methane	R-12	Dichlorodifluoro methane	CCl2F2	75-71-8	120.913
Benzamide			C7H7NO	55-21-0	121.137
Benzoic acid			C7H6O2	65-85-0	122.121

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
2,4-Dimethylphenol		2,4-Xylenol	C8H10O	105-67-9	122.167
3,5-Dimethylphenol	1,3,5-Xylenol	3,5-Xylenol	C8H10O	108-68-9	122.167
4-Ethylphenol	p-Ethylphenol	4-Hydroxyethylbenzene	C8H10O	123-07-9	122.167
2,3-Dimethylphenol	1-Hydroxy-2,3-dimethylbenzene	Xylenol	C8H10O	526-75-0	122.167
2,6-Dimethylphenol	1-Hydroxy-2,6-dimethylbenzene	2,6-Xylenol	C8H10O	576-26-1	122.167
3-Ethylphenol	3-Ethylbenzotol	1-Hydroxy-3-ethylbenzene	C8H10O	620-17-7	122.167
2-Ethylphenol	2-Ethylphenyl alcohol	1-Hydroxy-2-ethylbenzene	C8H10O	90-00-6	122.167
3,4-Dimethylphenol	1,2-Dimethyl-4-hydroxybenzene	3,4-Xylenol	C8H10O	95-65-8	122.167
2,5-Dimethylphenol	2,5-Dimethylbenzotol	1,2,5-Xylenol	C8H10O	95-87-4	122.167
Propenylcyclohexene			C9H14	13511-13-2	122.207
Benzyl mercaptan			C7H8S	100-53-8	124.203
1-Nonyne			C9H16	3452-09-3	124.223
1-Nonene	Non-1-ene		C9H18	124-11-8	126.239
Hydrogen iodide	Iodane	Hydroiodic acid	HI	10034-85-2	127.912
Naphthalene			C10H8	91-20-3	128.171
3-Octanone			C8H16O	106-68-3	128.212
2-Octanone			C8H16O	111-13-7	128.212
Octanal			C8H16O	124-13-0	128.212
Nonane	n-Nonane		C9H20	111-84-2	128.2551
2,2,4,4-Tetramethylpentane	Di-tert-butylmethane		C9H20	1070-87-7	128.2551
2,2,3,4-Tetramethylpentane			C9H20	1186-53-4	128.2551
2,3,3,4-Tetramethylpentane			C9H20	16747-38-9	128.2551
2-Methyloctane	Isononane		C9H20	3221-61-2	128.2551
Heptanoic acid			C7H14O2	111-14-8	130.185
1-Octanol	Capryl alcohol	1-Octyl alcohol	C8H18O	111-87-5	130.228
2-Octanol			C8H18O	123-96-6	130.228
Dibutyl ether			C8H18O	142-96-1	130.228
Ethylhexyl ether			C8H18O	5756-43-4	130.228
Bromo(difluoro)methane	Bromodifluoro methane	Difluorobromomethane	CHBrF2	1511-62-2	130.92
Xenon			Xe	7440-63-3	131.293
1,2,3,4-Tetrahydronaphthalene			C10H12	119-64-2	132.202
Heptyl mercaptan			C7H16S	1639-09-4	132.267
1,1,2-Trichloroethane			C2H3Cl3	79-00-5	133.404
1,1,2,2,3-pentafluoropropane	R-245ca		C3H3F5	679-86-7	134.04794
1,1,1,3,3-pentafluoropropane	R-245fa		C3H3F5	460-73-1	134.04794
Butylbenzene	n-Butylbenzene	Butyl benzene	C10H14	104-51-8	134.218
1,4-Diethylbenzene	para-Diethylbenzene	p-Diethylbenzene	C10H14	105-05-5	134.221
1,2,4,5-Tetramethylbenzene	Durene		C10H14	95-93-2	134.221
Trichlorosilane	SiHCl3		HCl3Si	10025-78-2	135.452
Methyl benzoate			C8H8O2	93-58-3	136.148
Benzyl ethyl ether			C9H12O	539-30-0	136.191
2-Chloro-1,1,1,2-tetrafluoroethane	R-124	1,1,1,2-tetrafluoro-2-chloroethane	C2HClF4	2837-89-0	136.475
1-Chloro-1,1,2,2-tetrafluoroethane	R-124a	1,1,2,2-Tetrafluoro chloroethane	C2HClF4	354-25-6	136.476

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Trichloro(fluoro)methane	R-11	Trichlorofluoro methane	CCl ₃ F	75-69-4	137.368
Hexafluoroethane	R-116	Perfluoroethane	C ₂ F ₆	76-16-4	138.01182
1-Decyne			C ₁₀ H ₁₈	764-93-2	138.25
cis-Decahydronaphthalene	(4a,8a)Decahydro naphthalene	cis-Decalin	C ₁₀ H ₁₈	493-01-6	138.253
trans-Decahydronaphthalene	(4a,8a)-Decahydro naphthalene	trans-Decalin	C ₁₀ H ₁₈	493-02-7	138.253
1-Decene	Dec-1-ene	Decylene	C ₁₀ H ₂₀	872-05-9	140.266
2,2,5-Trimethylheptane			C ₁₀ H ₂₂	20291-95-6	142
1-Methylnaphthalene	Methyl-1-naphthalene		C ₁₁ H ₁₀	90-12-0	142.2
Nonanal			C ₉ H ₁₈ O	124-19-6	142.239
2,2,3,3-Tetramethylhexane			C ₁₀ H ₂₂	13475-81-5	142.28168
3,3,5-Trimethylheptane			C ₁₀ H ₂₂	7154-80-5	142.28168
Decane	n-decane		C ₁₀ H ₂₂	124-18-5	142.28168
Dihydrogen hexafluorosilicate	Hexafluorosilicic acid	SiF ₆	H ₂ F ₆ Si	16961-83-4	144.09
Octanoic acid			C ₈ H ₁₆ O ₂	124-07-2	144.211
2-Ethyl hexanoic acid			C ₈ H ₁₆ O ₂	149-57-5	144.211
1-Nonanol	Nonyl	Nonyl alcohol	C ₉ H ₂₀ O	143-08-8	144.255
2-Nonanol			C ₉ H ₂₀ O	628-99-9	144.255
Sulfur hexafluoride	Hexafluoro-λ ₆ -sulfane	SF ₆	F ₆ S	2551-62-4	146.0554192
Octyl mercaptan			C ₈ H ₁₈ S	111-88-6	146.294
p-Dichlorobenzene			C ₆ H ₄ Cl ₂	106-46-7	147.002
m-Dichlorobenzene			C ₆ H ₄ Cl ₂	541-73-1	147.002
o-Dichlorobenzene			C ₆ H ₄ Cl ₂	95-50-1	147.002
1,1,1,3,3-pentafluorobutane	R-365mfc		C ₄ H ₅ F ₅	406-58-6	148.07452
Phthalic anhydride			C ₈ H ₄ O ₃	85-44-9	148.116
Bromo(trifluoro)methane	R-13B1	CFC 13B1	CBrF ₃	75-63-8	148.91
Ethyl benzoate			C ₉ H ₁₀ O ₂	93-89-0	150.175
1,1,1,2,3,3-hexafluoropropane	R-236ea		C ₃ H ₂ F ₆	431-63-0	152.0384
1,1,1,3,3,3-hexafluoropropane	R-236fa		C ₃ H ₂ F ₆	690-39-1	152.0384
2,2-Dichloro-1,1,1-trifluoroethane	R-123	Dichlorotrifluoromethyl methane	C ₂ HCl ₂ F ₃	306-83-2	152.931
Phosphoric trichloride	Phosphoryl chloride	Phosphorus oxychloride	Cl ₃ OP	10025-87-3	153.332
Tetrachloromethane	R-10	Carbon tetrachloride	CCl ₄	56-23-5	153.823
Biphenyl	1,1'-Biphenyl	Phenylbenzene	C ₁₂ H ₁₀	92-52-4	154.208
1-Chloro-1,1,2,2,2-pentafluoroethane	R-115	1-Chloropenta fluoroethane	C ₂ ClF ₅	76-15-3	154.466416
Di-1,3-cyclopentadien-1-yl magnesium	Bis(cyclopentadienyl) magnesium	Cp ₂ Mg	C ₁₀ H ₁₀ Mg	1284-72-6	154.491
Decanal			C ₁₀ H ₂₀ O	112-31-2	156.265
Undecane			C ₁₁ H ₂₄	1120-21-4	156.308
Triethylgallium	TeGa		C ₆ H ₁₅ Ga	1115-99-7	156.906
Bromobenzene			C ₆ H ₅ Br	108-86-1	157.008
Nonanoic acid			C ₉ H ₁₈ O ₂	112-05-0	158.238
2-Methyloctanoic acid			C ₉ H ₁₈ O ₂	3004-93-1	158.238
1-Decanol	1-Hydroxydecane	Decan-1-ol	C ₁₀ H ₂₂ O	112-30-1	158.281
Bromine			Br ₂	7726-95-6	159.808
Trimethylindium	TMI		C ₃ H ₉ In	3385-78-2	159.922

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Nonyl mercaptan			C ₉ H ₂₀ S	1455-21-6	160.32
Vinyl trichlorosilane			C ₂ H ₃ Cl ₃ Si	75-94-5	161.49
1,3,5-Triethylbenzene			C ₁₂ H ₁₈	102-25-0	162.276
Ethyltrichlorosilane			C ₂ H ₅ Cl ₃ Si	115-21-9	163.506
Bromo(chloro)difluoromethane	R-12B1	Chlorobromo difluoromethane	CBrClF ₂	353-59-3	165.365
Terephthalic acid			C ₈ H ₆ O ₄	100-21-0	166.131
1,2,3,4,5-Pentafluorobenzene	Pentafluorobenzene		C ₆ HF ₅	363-72-4	168.066
Tetrachlorosilane	Silicon tetrachloride	SiCl ₄	Cl ₄ Si	10026-04-7	169.896
1,1,1,2,3,3,3-heptafluoropropane	R-227ea		C ₃ HF ₇	431-89-0	170.02886
Diphenyl ether			C ₁₂ H ₁₀ O	101-84-8	170.207
Dodecane	n-Dodecane		C ₁₂ H ₂₆	112-40-3	170.33484
1,1-Dichloro-1,2,2,2-tetrafluoroethane	R-114a	Dichlorotetrafluoroethane	C ₂ Cl ₂ F ₄	374-07-2	170.921
1,2-Dichloro-1,1,2,2-tetrafluoroethane	R-114	Cryofluorane	C ₂ Cl ₂ F ₄	76-14-2	170.921
Decanoic acid			C ₁₀ H ₂₀ O ₂	334-48-5	172.265
1-Undecanol			C ₁₁ H ₂₄ O	112-42-5	172.308
Dibromomethane			CH ₂ Br ₂	74-95-3	173.835
Decyl mercaptan			C ₁₀ H ₂₂ S	143-10-2	174.347
Phenanthrene			C ₁₄ H ₁₀	85-01-8	178.229
Anthracene			C ₁₄ H ₁₀	120-12-7	178.233
Benzophenone			C ₁₃ H ₁₀ O	119-61-9	182.218
Tridecane		n-Tridecane	C ₁₃ H ₂₈	629-50-5	184.361
Hexafluorobenzene	Perfluorobenzene		C ₆ F ₆	392-56-3	186.056
1-Dodecanol	1-Hydroxydodecane	Dodecan-1-ol	C ₁₂ H ₂₆ O	112-53-8	186.338
1,1,2-Trichloro-1,2,2-trifluoroethane	R-113	Daiflon 113	C ₂ Cl ₃ F ₃	76-13-1	187.375
1,2-Dibromoethane	Ethylene dibromide		C ₂ H ₄ Br ₂	106-93-4	187.861
1,1-Dibromoethane			C ₂ H ₄ Br ₂	557-91-5	187.861
Octafluoropropane	R-218	2,2-Dihydroperfluoropropane	C ₃ F ₈	76-19-7	188.01933
Dimethyl terephthalate			C ₁₀ H ₁₀ O ₄	120-61-6	194.184
Dimethyl phthalate			C ₁₀ H ₁₀ O ₄	131-11-3	194.184
trifluoroiodomethane	trifluoroiodomethane		CF ₃ I	2314-97-8	195.9104
Tetradecane	n-Tetradecane		C ₁₄ H ₃₀	629-59-4	198.388
Octafluorocyclobutane			C ₄ F ₈	115-25-3	200.04
1-Chloro-2,3,4,5,6-pentafluorobenzene	Perfluorochlorobenzene	Chloropentafluorobenzene	C ₆ ClF ₅	344-07-0	202.511
Tetraethyl orthosilicate	TEOS	Silicic acid	C ₈ H ₂₀ O ₄ Si	78-10-4	208.327
Dibromo(difluoro)methane	R-12B2	Dibromodifluoromethane	CBr ₂ F ₂	75-61-6	209.816
Pentadecane	n-Pentadecane		C ₁₅ H ₃₂	629-62-9	212.415
1,3,5-Trinitrobenzene			C ₆ H ₃ N ₃ O ₆	99-35-4	213.105
Tetrachlorogermane	Germanium chloride	GeCl ₄	Cl ₄ Ge	10038-98-9	214.421
Radon			Rn	10043-92-2	222.018
Tetrakis(dimethylamido)titanium(IV)	TDMAT	[(CH ₃) ₂ N] ₄ Ti	C ₈ H ₂₄ N ₄ Ti	3275-24-9	224.17
Hexadecane	n-Hexadecane	Cetane	C ₁₆ H ₃₄	544-76-3	226.441
2,4,6-Trinitrotoluene			C ₇ H ₅ N ₃ O ₆	118-96-7	227.131
o-Terphenyl			C ₁₈ H ₁₄	84-15-1	230.304
perfluorobutane	decafluorobutane		C ₄ F ₁₀	355-25-9	238.03

Preferred Name	Alternate Name 1	Alternate Name 2	Formula	CAS#	Molecular Weight
Heptadecane			C17H36	629-78-7	240.468
Octadecane	n-Octadecane		C18H38	593-45-3	254.494
Nonadecane			C19H40	629-92-5	268.521
Eicosane			C20H42	112-95-8	282.547
Dodecafluoropentane	Perfluoro-n-pentane	Perflenapent	C5F12	678-26-2	288.03
Tungsten hexafluoride	Tungsten(VI) fluoride	WF6	F6W	7783-82-6	297.83
Tetrabromomethane	Carbon tetrabromide		CBr4	558-13-4	331.627
Tetrakis(diethylamido)titanium(IV)	TDEAT	[(C2H5)2N]4Ti	C16H40N4Ti	4419-47-0	336.383
Tetradecafluorohexane	n-Tetradecafluorohexane	Perfluorohexane	C6F14	355-42-0	338.044
Tetrabromosilane	Silicon tetrabromide		Br4Si	7789-66-4	347.702
Hexadecafluoroheptane	Perfluoroheptane		C7F16	335-57-9	388.052
Octadecafluorooctane	Perfluorooctane		C8F18	307-34-6	438.059
Icosafluorononane	Perfluorononane	Eicosafluorononane	C9F20	375-96-2	488.067
Docosafluorodecane	Perfluorodecane		C10F22	307-45-9	538.075

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