

Refining



Natural Gas



Petrochemical



Typical Liquid Mixtures

ASTM D-3710	
Compounds	Conc (LV%)
Propane	1.0
Isobutane	3.0
n-Butane	10.0
Isopentane	9.0
n-Pentane	7.0
2-Methylpentane	5.0
n-Hexane	5.0
2,4-Dimethylpentane	5.0
n-Heptane	9.0
Toluene	10.0
n-Octane	5.0
p-Xylene	12.0
n-Propylbenzene	3.0
n-Decane	3.0
n-Butylbenzene	3.0
n-Dodecane	3.0
n-Tridecane	2.0
n-Tetradecane	2.0
n-Pentadecane	2.0

Typical Refinery Gas Standard

Compounds	Concentration
Hydrogen	38.5%
Methane	15.0%
Propane	8.0%
Ethylene	7.5%
Ethane	7.0%
Nitrogen	4.0%
Carbon Dioxide	3.0%
Propylene	3.0%
n-Butane	2.5%
Isobutane	2.0%
Carbon Monoxide	2.0%
1-Butene	1.0%
Isobutylene	1.0%
trans-2-Butene	1.0%
cis-2-Butene	1.0%
Acetylene	1.0%
n-Pentane	0.5%
Isopentane	0.5%
Argon	1.0%
1-Pentene	0.1%
trans-2-Pentene	0.1%
cis-2-Pentene	0.1%
2-methyl 2-Pentene	0.1%
n-Hexane	0.1%

Trace Impurity Mixtures

Fuel Standards	
MTBE	100 ppm
Isooctane	Balance
Dibutyl Disulfide	1 ppm
Isooctane	Balance
Industrial Hygiene	
Hydrogen Sulfide	Up to 300 ppm
Carbon Monoxide	Up to 300 ppm
Methane	2.5%
Oxygen	19%
Nitrogen	Balance
Environmental	
Carbon Dioxide	10%
Carbon Monoxide	50 ppm
Nitric Oxide	100 ppm
Sulfur Dioxide	250 ppm
Nitrogen	Balance

Total Sulfur Standards

Reduced sulfur blends in inert matrix.
NIST traceable to H₂S SRM.

Compounds	Minimum Conc.
Carbon Disulfide	1.0 ppm
Carbonyl Sulfide	95 ppb
Dimethyl Disulfide*	0.5 ppm
Dimethyl Sulfide	0.5 ppm
Ethyl Mercaptan	1.0 ppm
Methyl Mercaptan	1.0 ppm
Propyl Mercaptan	2.0 ppm

* Dimethyl Disulfide must be blended separately due to instability and reactivity with other components.

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Air Products can supply gas blends containing over 100 individual components.		
(1S)-(-)-B-Pinene	1-Chloro-1,1,2,2-tetrafluoroethane	1-Undecanol
(R)-3,7-Dimethyl-1,6-octadiene	1-Chloro-1,1-difluoroethane	1-Undecene
(S)-3,7-Dimethyl-1,6-octadiene	1-Chloro-1,2,2,2-tetrafluoroethane	2,2,3,3-Tetramethylbutane
1,1,1,2,2,3,3,4,4-Nonafluoro-4-methoxybutane	1-Chloro-1-fluoroethylene	2,2,3,3-Tetramethylhexane
1,1,2-Trimethylcyclopentane	1-Chloro-2,2,2-trifluoroethane	2,2,3,3-Tetramethylpentane
1,1,3-Trimethylcyclopentane	1-Decanethiol	2,2,3,4-Tetramethylpentane
1,1-Dichloro-1,2,2,2-tetrafluoroethane	1-Decanol	2,2,3-Trimethylbutane
1,1-Diethylcyclopentane	1-Decyne	2,2,3-Trimethylhexane
1,1-Dimethyl-2-ethylcyclopentane	1-Eicosene	2,2,3-Trimethylpentane
1,1-Dimethylcyclohexane	1-Ethydecacyclonaphthalene (Mixed Isomers)	2,2,4,4-Tetramethylpentane
1,1-Dimethylcyclopentane	1-Ethyl-cis-decahydronaphthalene	2,2,4-Trimethylhexane
1,2,3,4-Tetrahydronaphthalene	1-Ethylcyclohexene	2,2,5,5-Tetramethylhexane
1,2,3,5-Tetramethylbenzene	1-Ethylcyclopentene	2,2,5-Trimethylhexane
1,2,3-Trimethylbenzene	1-Ethyl-trans-decahydronaphthalene	2,2-Dichloro-1,1,1-trifluoroethane
1,2,4,5-Tetramethylbenzene	1-Fluorobutane	2,2-Difluoropropane
1,2,4-Triethylbenzene	1-Fluoropentane	2,2-Dimethyl-3-ethylpentane
1,2,4-Trimethylbenzene	1-Heptadecene	2,2-Dimethylheptane
1,2-Dichlorobenzene	1-Heptanethiol	2,2-Dimethylhexane
1,2-Dichloroethane-d4	1-Heptyne	2,2-Dimethylpentane
1,2-Diphenylethane	1-Hexanethiol	2,2-Dimethylpropane
1,2-Ethanedithiol	1-Hexyne	2,3,3,4-Tetramethylpentane
1,2-Hexadiene	1-Methoxy-2-methylbutane	2,3,3-Trimethyl-1-butene
1,2-Pentadiene	1-Methyl-1-butyne	2,3,3-Trimethyl-1-pentene
1,3,5-Triethylbenzene	1-Methyl-1-ethylcyclopentane	2,3,3-Trimethylhexane
1,3-Butadiene	1-Methyl-1-n-propylcyclopentane	2,3,3-Trimethylpentane
1,3-Cyclopentadiene	1-Methyl-1-propanethiol	2,3,5-Trimethylhexane
1,3-Dichloro-1,1,1,2,3-pentafluoropropane	1-Methyl-2-pyrrolidinone	2,3-Dimethyl-1,3-butadiene
1,3-Dichlorobenzene	1-Methyl-4-isopropylcyclohexane	2,3-Dimethyl-1-butene
1,3-Dichloropropenes (Mixed Isomers)	1-Methyl-cis-decahydronaphthalene	2,3-Dimethyl-1-hexene
1,3-Dioxane	1-Methylcyclohexene	2,3-Dimethyl-1-pentene
1,3-Hexachlorobutadiene	1-Methylcyclopentene	2,3-Dimethyl-2-butene
1,3-Propanediol	1-Methyldecahydronaphthalene (Mixed Isomers)	2,3-Dimethyl-2-hexene
1,4-Dichlorobenzene	1-Methylnaphthalene	2,3-Dimethyl-2-pentene
1,4-Dioxane	1-Methyl-trans-decahydronaphthalene	2,3-Dimethylhexane
1,4-Pentadiene	1-Nitrobutane	2,3-Dimethylpentane
1,5-Hexadiene	1-Nitropropane	2,3-Hexadiene
1,6-Hexanedithiol	1-Nonadecene	2,3-Pentadiene
1,cis-2,cis-3-Trimethylcyclopentane	1-Nonanethiol	2,4,4-Trimethylhexane
1,cis-2,cis-4-Trimethylcyclopentane	1-Nonene	2,4-Dimethyl-1-pentene
1,cis-2,trans-3-Trimethylcyclopentane	1-Nonyne	2,4-Dimethyl-2-pentene
1,cis-2,trans-4-Trimethylcyclopentane	1-Octanethiol	2,4-Dimethyl-3-ethylpentane
1,trans-2,cis-3-Trimethylcyclopentane	1-Octyne	2,4-Dimethyl-3-isopropylpentane
1,trans-2,cis-4-Trimethylcyclopentane	1-Pentadecene	2,4-Dimethylhexane
1-Bromo-4-fluorobenzene	1-Pentanethiol	2,5-Dimethylfuran
1-Bromobutane	1-Pentyne	2,5-Dimethylhexane
1-Bromopropane	1-Propanethiol	2,6-Dimethyl-1,6-heptadiene
1-Butene	1-Tridecene	2,6-Dimethylheptane

Refining	Natural Gas	Petrochemical
Air Products can supply gas blends containing over 100 individual components.		
2,6-Dimethylnaphthalene	3,3-Dimethylhexane	9-Ethyldecahydronaphthalene (Mixed Isomers)
2,6-Octadiene	3,3-Dimethylpentane	9-Ethyl-trans-decahydronaphthalene
2,7-Dimethyloctane	3,4-Dimethyl-1-pentene	Acetaldehyde
2-Bromopropane	3,4-Dimethylhexane	Acetic acid
2-Bromothiophene	3,7-Dimethyl-1,6-octadiene	Acetone
2-Butanol	3-Ethyl-1-hexene	Acrolein
2-Chloro-1,1-difluoroethylene	3-Ethyl-1-pentene	Acrylic acid
2-Chloro-2-ethylvinyl ether	3-Ethyl-2-pentene	Acrylonitrile
2-Ethyl-1-hexanol	3-Ethylcyclopentene	Allyl alcohol
2-Ethyl-1-hexene	3-Ethylheptane	Allyl chloride
2-Ethyl-1-pentene	3-Ethylhexane	Amyl ethyl ether
2-Ethyl-3-methyl-1-butene	3-Ethylpentane	Amyl tert-butyl ether
2-Hexanone	3-Ethylthiophene	Aniline
2H-Pentafluoropropylene	3-Methyl-1,2-pentadiene	Benzaldehyde
2-Methoxybenzyl alcohol	3-Methyl-1-butene	Benzene
2-Methyl-1,5-hexadiene	3-Methyl-1-heptene	Benzyl alcohol
2-Methyl-1-butanethiol	3-Methyl-1-hexene	Benzyl chloride
2-Methyl-1-buten-3-yne	3-Methyl-1-pentenenes (Mixed Isomers)	Benzyl sulfide
2-Methyl-1-heptene	3-Methyl-2-butanol	Butane
2-Methyl-1-hexene	3-Methyl-2-pentenenes (Mixed Isomers)	Butyl acrylate
2-Methyl-1-pentene	3-Methyl-3-ethylpentane	Butylcyclohexane
2-Methyl-1-propanethiol	3-Methyl-3-heptene	Butylcyclopentane
2-Methyl-2,4-hexadiene	3-Methylcyclopentene	Carbon Disulfide
2-Methyl-2-butanethiol	3-Methylhexane	Carbon Disulfide
2-Methyl-2-butanol	3-Methylnonane	Carbon tetrachloride
2-Methyl-2-hexene	3-Methyloctane	Carbonyl sulfide
2-Methyl-2-nitropropane	3-Methylthiophene	Chlorobenzene
2-Methyl-3-ethylpentane	4,4-Dimethyl-1-pentene	Chloroform
2-Methylfuran	4-Ethyl-1-hexene	cis-1,2-Dichloroethylene
2-Methylheptane	4-Methyl-1-heptene	cis-1,2-Diethylcyclopentane
2-Methylhexane	4-Methyl-1-hexene	cis-1,2-Dimethylcyclohexane
2-Methylnaphthalene	4-Methyl-1-pentene	cis-1,2-Dimethylcyclopentane
2-Methylnonane	4-Methyl-2-hexene (Mixed Isomers)	cis-1,2-Dimethylcyclopropane
2-Methyloctane	4-Methyl-2-pentene (Mixed Isomers)	cis-1,3-Dichloro-1-propene
2-Methylthiophene	4-Methylcyclopentene	cis-1,3-Dimethylcyclohexane
2-Nitropropane	4-Methylheptane	cis-1,3-Dimethylcyclopentane
2-Octene (Mixed Isomers)	4-Methylnonane	cis-1,3-Pentadiene
2-Pentene (Mixed Isomers)	4-Methyloctane	cis-1,4-Dimethylcyclohexane
2-Pentyne	4-Methylstyrene	cis-1-Methyl-2-ethylcyclopentane
2-Propanethiol	4-tert-Butylhydroquinone	cis-1-Methyl-3-ethylcyclopentane
3,3,3-Trifluoropropene	4-Vinyl-1-cyclohexene	cis-2,2-Dimethyl-3-hexene
3,3,4-Trimethylheptane	5-Ethylidene-2-norbornene	cis-2-Butene
3,3,4-Trimethylhexane	5-Methyl-1-hexene	cis-2-Heptene
3,3,5-Trimethylheptane	5-Methylnonane	cis-2-Hexene
3,3-Dichloro-1,1,1,2,2-pentafluoropropane	5-Nonanone	cis-2-Methyl-3-hexene
3,3-Diethylpentane	5-Vinyl-2-norbornene	cis-2-Octene
3,3-Dimethyl-1-butene	6-Methyl-2-heptene	cis-3,4-Dimethyl-2-pentene
3,3-Dimethyl-1-pentene	9-Ethyl-cis-decahydronaphthalene	

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Air Products can supply gas blends containing over 100 individual components.

cis-3-Heptene	Ethane	Isobutylbenzene
cis-3-Hexene	Ethanethiol (Ethyl Mercaptan)	Isobutylcyclohexane
cis-3-Methyl-2-hexene	Ethanol	Isobutylcyclopentane
cis-3-Methyl-2-pentene	Ethyl chloride	Isobutylene
cis-3-Methyl-3-hexene	Ethyl disulfide	Isohexene
cis-3-Octene	Ethyl fluoride	Isopentane
cis-4,4-Dimethyl-2-pentene	Ethyl iodide	Isoprene
cis-4-Methyl-2-hexene	Ethyl methacrylate	Isopropanol
cis-4-Methyl-2-pentene	Ethyl methyl disulfide	Isopropyl Disulfide
cis-4-Octene	Ethyl methyl ether	Isopropyl ether
cis-5-Methyl-2-hexene	Ethyl propyl ether	Isopropyl fluoride
cis-Decahydronaphthalene	Ethyl tert-amyl ether	Isopropyl Mercaptan
cis-Penten-3-yne-1	Ethyl tert-butyl ether	Isopropyl nitrate
Cresol (Mixed Isomers)	Ethylacetylene	Isopropylamine
Cyanogen	Ethylamine	Isopropylbenzene
Cycloheptane	Ethylcyclobutane	Isopropylcyclohexane
Cyclohexanol	Ethylcycloheptane	Isopropylcyclopentane
Cyclohexanone	Ethylcyclohexane	m-Chlorotoluene
Cyclohexene	Ethylcyclopentane	m-Cresol
Cyclononane	Ethylcyclopropane	m-Diethylbenzene
Cyclooctane	Ethylene	Menthol
Cyclopropane	Ethylene dibromide	Methane
Decahydronaphthalene, (Mixed Isomers)	Ethylene glycol	Methanol
Dibenzothiophene	Ethylene glycol monobutyl ether	Methyl acrylate
Dicyclohexane	Ethylene oxide	Methyl bromide
Dicyclopentadiene	Ethylenediamine	Methyl chloride
Diethanolamine	Fluorobenzene	Methyl ethyl sulfide
Diethyl Disulfide	Formaldehyde	Methyl fluoride
Diethyl ether	Furfural	Methyl formate
Diethyl sulfide	Halocarbon-410a	Methyl isobutyl ketone
Diethylamine	Halothane	Methyl isopropyl ketone
Diethylbenzenes (Mixed Isomers)	Helium-3	Methyl mercaptan
Diethoxymethane	Henicosane	Methyl perfluoropropyl ether
Difluoromethane	Heptacosane	Methyl propyl ether
Diisobutyl sulfide	Hexachlorobenzene	Methyl tert-butyl ether
Diisopropyl disulfide	Hexacosane	Methylacetylene
Diisopropyl sulfide	Hexafluoro-1,3-butadiene	Methylamine
Dimethyl ether	Hexamethyldisiloxane	Methylcyclobutane
Dimethyl methylphosphonate	Hexatriacontane	Methylcycloheptane
Dimethyl sulfide	Humulene	Methylcyclohexane
Dimethyl trisulfide	Hydrogen	Methylcyclopentane
Dimethylacetamide	Hydrogen bromide	Methyl-d3-benzene-d5
Dimethylamine	Hydrogen chloride	Methyl-d3-ether
Dimethylethylamine	Hydrogen fluoride	m-Ethyltoluene
Dimethylnaphthalenes (Mixed Isomers)	Hydrogen iodide	N,N-Dimethylformamide
Dimethylsulfoxide	Hydrogen sulfide	Naphthalene
Diphenyl	Indan	Natural gas
Diphenylmethane	Indene	n-Butanol
Di-tert-butyl peroxide	Isoamyl acetate	n-Butyl Disulfide
Di-tert-butyl sulfide	Isoamyl mercaptan	n-Butyl disulfide
d-Limonene	Isobutane	n-Butyl mercaptan
Docosane	Isobutanol	n-Butyl methacrylate
Dotriacontane	Isobutyl acrylate	n-Butyl sulfide
Eicosane	Isobutyl Mercaptan	n-Butylacetate
Epichlorohydrin	Isobutyl methacrylate	n-Decylcyclohexane

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Air Products can supply gas blends containing over 100 individual components.		
n-Decylcyclopentane n-Dodecyl alcohol n-Dodecylcyclohexane n-Dodecylcyclopentane n-Eicosylcyclohexane n-Eicosylcyclopentane N-Formylmorpholine n-Heptadecane n-Heptadecylcyclohexane n-Heptadecylcyclopentane n-Heptane n-Heptylcyclohexane n-Heptylcyclopentane n-Hexadecylcyclohexane n-Hexadecylcyclopentane n-Hexaldehyde n-Hexane n-Hexanol n-Hexylcyclopentane n-Hexylcyclohexane Nitroethane Nitromethane Nitrosyl chloride n-Nonadecylcyclohexane n-Nonanoic acid n-Nonyl alcohol n-Nonyl aldehyde n-Nonylcyclohexane n-Nonylcyclopentane n-Nonyldecylcyclopentane n-Octadecane n-Octadecylcyclohexane n-Octadecylcyclopentane n-Octanol n-Octylcyclohexane n-Octylcyclopentane Nonacosane Nonadecane n-Pentadecylcyclohexane n-Pentadecylcyclopentane n-Pentane n-Pentylbenzene n-Pentylcyclohexane n-Pentylcyclopentane n-Propyl benzene n-Propyl Disulfide n-Propyl Mercaptan n-Propyl nitrate n-Propyl Sulfide n-Tetradecyl alcohol n-Tetradecylcyclohexane n-Tetradecylcyclopentane n-Tridecylcyclohexane n-Tridecylcyclopentane n-Undecylcyclohexane	n-Undecylcyclopentane o-Cresol Octacosane o-Dichlorobenzene-d4 o-Diethylbenzene o-Ethyltoluene Oxygen p-Chlorotoluene p-Cresol p-Diethylbenzene Pentacosane Pentafluoroethane Perfluoro(methyl vinyl ether) Perfluoro-2-butene (Mixed Isomers) Perfluorobutane Perfluoropropyl vinyl ether p-Ethyltoluene Phenol Phenyl ether Phenyl isocyanate Phenyl mercaptan Phenyl sulfide Piperlenes (Mixed Isomers) Propadiene Propane Propionic acid Propionitrile Propyl disulfide Propyl sulfide Propylamine Propylcyclohexane Propylcyclopentane Propylene Propylene glycol Propylene oxide sec-Butylcyclohexane sec-Butyl ether sec-Butyl Mercaptan sec-Butyl methyl ether sec-Butyl Sulfide sec-Butylbenzene sec-Phenethyl alcohol Squalane Sulfur Sulfur dioxide Sulfur trioxide tert-Amyl methyl ether tert-Butyl alcohol tert-Butyl disulfide tert-Butyl mercaptan tert-Butyl Sulfide tert-Butylbenzene tert-Butylcatechol tert-Butylcyclohexane Tetracontane	Tetracosane Tetrafluoromethane Tetrahydrofuran Tetrahydrothiophene Tetramethylene sulfone Tetratetracontane Tetratriacontane Thianaphthene Thiophene (Thiofuran) Toluene trans-1,2-Dichloroethylene trans-1,2-Dimethylcyclohexane trans-1,2-Dimethylcyclopentane trans-1,2-Dimethylcyclopropane trans-1,3-Dichloro-1-propene trans-1,3-Dimethylcyclohexane trans-1,3-Dimethylcyclopentane trans-1,3-Pentadiene trans-1,4-Dimethylcyclohexane trans-1-Methyl-2-ethylcyclopentane trans-1-Methyl-3-ethylcyclopentane trans-2-Butene trans-2-Heptene trans-2-Hexene trans-2-Methyl-3-hexene trans-2-Octene trans-3,4-Dimethyl-2-pentene trans-3-Heptene trans-3-Methyl-2-hexene trans-3-Methyl-2-pentene trans-3-Methyl-3-hexene trans-3-Octene trans-4,4-Dimethyl-2-pentene trans-4-Methyl-2-pentene trans-4-Octene trans-5-Methyl-2-hexene trans-Decahydronaphthalene trans-Penten-3-yne-1 Triacontane Tricosane Tridecyl alcohol Triethylamine Triisobutylene Trimethylamine Vinyl acetylene Vinyl chloride Vinyl fluoride Vinyl methyl ether Xylenes (Mixed Isomers) <input type="checkbox"/> -Diisobutylene <input type="checkbox"/> -Farnesene <input type="checkbox"/> -Methylstyrene <input type="checkbox"/> -Pinene <input type="checkbox"/> -Diisobutylene

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Petrochemical

Air Products can supply gas blends containing over 100 individual components.

Typical Natural Gas Reference Standards

Component Concentration(Mol%)	**GPA Gas Reference	High Helium Reference	D analyze Mixture	C7+ Natural Gas Mixture	Sour Natural Gas Mixture	Extended Natural Gas Mixture	Natural Gas Mixture	Pipeline Natural Gas Mixture	High Ethane Gas Mixture
Argon	–	–	–	–	0.4	0.37500	–	–	–
n-Butane	3.0	1.0	0.3	0.3	0.3	0.30000	0-5.0	0.10	3.00
Carbon Dioxide	1.0	0.3	1.0	1.0	1.0	1.00000	0-25.0	0.60	0.50
n-Decane	–	–	–	–	–	0.00018	*	–	–
n-Dodecane	–	–	–	–	–	0.00005	*	–	–
Ethane	9.0	3.0	5.0	4.6	6.0	6.00000	0-10.0	4.0	12.50
Helium	0.5	2.0	–	–	0.5	0.50000	–	–	–
n-Heptane	–	–	–	0.03	0.02	0.00075	*	–	–
n-Hexane	–	–	0.03	0.05	0.05	0.02300	*	–	–
Hydrogen Sulfide	–	–	–	–	1.0	–	0-25.0	–	–
Isobutane	3.0	1.0	0.3	0.3	0.3	0.30000	0-5.0	–	3.00
Isopentane	1.0	0.3	0.1	0.1	0.1	0.10000	0-1.0	0.03	0.50
Methane	70.5 (Balance)	88.7 (Balance)	89.57 (Balance)	90.0 (Balance)	87.12 (Balance)	86.99999 (Balance)	70-90 (Balance)	94 (Balance)	64 (Balance)
Methyl Mercaptan	–	–	–	–	–	–	–	4 ppm	–
Nitrogen	5.0	1.6	2.5	2.5	2.0	3.00000	–	0.60%	9.00
n-Nonane	–	–	–	0.004	–	0.00018	–	–	–
n-Octane	–	–	–	0.016	0.01	0.00075	–	–	–
Propane	6.0	1.8	1.0	1.0	1.0	1.30000	0-6.0	0.40	7.0
n-Pentane	1.0	0.3	0.1	0.1	0.1	0.10000	0-1.0	0.02	0.50
Neopentane	–	–	0.1	–	0.1	–	–	–	–
n-Tridecane	–	–	–	–	–	0.00005	*	–	–
n-Undecane	–	–	–	–	–	0.00005	*	–	–

* C6+: As specified by enduser (Dewpoint restrictions may apply, All concentrations must add up to 100%).

** Gas Processors Association

Refining

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Petrochemical

Pure Organic Products

High Purity Organics

Chemical	Grade	Quality	Page Number
1, 3 Butadiene	2.5	99.5%	C10
n-Butane	3.0	99.9%	C11
Ethylene	5.0	99.999%	C23
Isobutane	4.0	99.99%	C39
Isobutylene	3.0	99.9%	C40
Methane	5.0	99.999%	C42
Propane	4.0	99.99%	C55
Propylene	2.8	99.8%	C56

Petrochemical Mixtures

LPG Reference Standards

Component	Propane	Isopentane	n-Pentane	Propylene	Propane/ Propylene	Butane
1-3, Butadiene	3.0%	-	-	20 ppm	-	-
2,2-Dimethylbutane	-	-	2.0%	-	-	-
2,3-Dimethylbutane	-	-	1.0%	-	-	-
Benzene	-	-	1.0%	-	-	-
n-Butane	3.0%	4.0%	-	40 ppm	0.1-1%	30-64%
cis-2-Butene	3.0%	0.1%	-	50 ppm	-	-
trans-2-Butene	3.0%	0.1%	-	30 ppm	-	-
Carbon Monoxide	-	-	-	-	-	-
Cyclohexane	-	-	2.0%	-	-	-
Cyclopentane	-	-	2.0%	-	-	-
Ethane	3.0%	-	-	-	0.1-4%	0-2%
Ethylene	3.0%	-	-	-	-	-
n-Hexane	-	-	2.0%	-	-	-
Isobutane	5.0%	0.6%	-	60 ppm	1-3%	15-25%
Isobutylene	-	-	-	40 ppm	1-3%	0-6%
Isopentane	-	95.0% (Bal)	5.0%	-	0-1%	0-2%
Isoprene	-	0.2%	-	-	-	-
Methane	1.0%	-	-	-	-	-
Methyl Cyclopentane	-	-	1.0%	-	-	-
2-Methylpentane	-	-	2.0%	-	-	-
3-Methylpentane	1.0%	-	1.0%	-	-	-
n-Pentane	5.0%	-	81.0% (Bal)	-	-	-
Propane	70.0% (Bal)	-	-	-	4-94%	3-45%
Propylene	-	-	-	99.97% (Bal)	4-95%	0-6%

Liquid Containers



Welker * Piston Cylinders

Available in 250cc – 1000cc these highly specialized containers which have working pressures of 2000 psi.

Refining

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Highly Reactive Volatile Organic Compounds (HRVOC) Standards

Typical Components	Concentration Range	Nitrogen Matrix	Methane Matrix	Helium Matrix	Hydrogen Matrix
Methane	3 ppm-Balance Gas	4-60 ppm	Balance	–	–
Ethane	3 ppm-12%	4-60 ppm	–	–	10 ppm-20%
Ethylene	3 ppm-12%	4-60 ppm	4-12%	3-160 ppm	10 ppm-10%
Acetylene	3 ppm-8000 ppm	–	–	3-160 ppm	–
Propane	3 ppm-8000 ppm	4-60 ppm	–	3-160 ppm	10 ppm-1%
Propylene	3 ppm-8000 ppm	–	4-3000 ppm	3-160 ppm	10 ppm-1%
Isobutane	3 ppm-8000 ppm	4-60 ppm	–	–	10-1000 ppm
n-Butane	3 ppm-8000 ppm	4-60 ppm	–	–	10-1000 ppm
trans-2-Butene	3 ppm-8000 ppm	–	4-5500 ppm	3-160 ppm	–
cis-2-Butene	3 ppm-8000 ppm	–	4-5500 ppm	3-160 ppm	–
1-Butene	3 ppm-8000 ppm	–	–	3-160 ppm	10-1000 ppm
isoButylene	3 ppm-8000 ppm	–	4-3000 ppm	3-160 ppm	–
isoPentane	3 ppm-8000 ppm	–	–	–	–
n-Pentane	3 ppm-8000 ppm	4-400 ppm	–	–	–
1,3 Butadine	3 ppm-8000 ppm	–	10-5500 ppm	3-160 ppm	10-1000 ppm
Hydrogen	0-Balance Gas	–	1-10%	–	Balance
Nitrogen	0-Balance Gas	Balance	0.5%-12%	–	–
Helium	0-Balance Gas	–	–	Balance	–