



n-Butane

Description

Synonym: Butane, Normal Butane
Formula: C₄H₁₀

Gas Data

Molecular Weight: 58.12
Density: 2.489 kg/m³ @ 21.1°C, 101.325 kPa
0.1554 lb/ft³ @ 70°F, 14.696 psia
Specific Volume: 0.4018 m³/kg @ 21.1°C, 101.325 kPa
6.435 ft³/lb @ 70°F, 14.696 psia

Safety Information

LFL in Air: 1.9%
UFL in Air: 8.5%
Permissible Exposure Limit (TLV): 800 ppm

Shipping Information

CAS Number: 106-97-8
UN Number: UN 1011
ECCN Number: 1C982
DOT Proper Shipping Name: Butane
DOT Classification: 2.1 (Flammable Gas)
DOT Label: FLAMMABLE GAS
TC Shipping Name: Butane
TC Classification: 2.1
TC Label: FLAMMABLE GAS

Cylinder Specifications

Cylinder Size	Valve Outlet CGA No.	Pressure psig @ 70°F	Pressure kPa @ 21.1°C	Approximate Ship Weight	
				lb	kg
1F	510	16	110	202	92
1A	510	16	110	172	78
2	510	16	110	90	40
3	510	16	110	45	21
4	510	16	110	24	11
6	510	16	110	20	9
7	510	16	110	6	3
LB	170	16	110	6	3

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.	
n-Butane, Research Purity 99.98%	G2208106	1F	120 lb	54.43 kg	Single Stage Reg. Tee Purge LB Regulator Detector Tube Outlet Plug Wrench Flash Arrestor	Series 3530-510 4753-510 Series 3550-180 8014-221SA TW-4 6103A-F	
<i>Typical Analysis</i>	G2208101	1A	40 lb	18.14 kg			
1,3-Butadiene <	1 ppm	G2208140	2	16 lb			7.26 kg
1-Butene <	1 ppm	G2208150	3	6 lb			2.72 kg
2-Butene (cis) <	6 ppm	G2208165	4	2 lb			0.91 kg
2-Butene (trans) <	15 ppm	G2208178	6	0.88 lb			400 gm
2,2-Dimethylpropane <	2 ppm	G2208181	7	0.44 lb			200 gm
Ethane <	1 ppm						
Ethylene <	1 ppm						
Isobutane <	120 ppm						
Isobutylene <	10 ppm						
Isopentane <	2 ppm						
Methane <	1 ppm						
Nitrogen <	9 ppm						
Oxygen <	5 ppm						
Pentane <	2 ppm						
Propane <	20 ppm						
Propylene <	2 ppm						
Sulfur <	1 ppm						
Water <	1 ppm						

A Certificate of Analysis is available on request at a nominal charge.
Analysis for sulfurs, alcohols, and hydrides can be done on a custom basis. Please inquire for more information.



n-Butane (continued)

Gas Grade Purity Specifications	Product Code	Cylinder Size	Content US	Content Metric	Equipment Recommendations	Model No.		
n-Butane, Matheson Purity 99.93%	G1813006	1F	120 lb	54.43 kg	Single Stage Reg. Tee Purge LB Regulator Detector Tube Outlet Plug Wrench Flash Arrestor	Series 3530-510 4753-510 Series 3550-180 8014-221SA TW-4 6103A-F		
<i>Typical Analysis</i>	G1813001	1A	40 lb	18.14 kg				
1,3 Butadiene < 2 ppm	G1813040	2	16 lb	7.26 kg				
1-Butene < 10 ppm	G1813050	3	6 lb	2.72 kg				
2-Butene < 75 ppm	G1813065	4	2 lb	0.91 kg				
2,2-Dimethylpropane < 10 ppm	G1813078	6	0.88 lb	400 gm				
Ethane < 3 ppm	G1813081	7	0.44 lb	200 gm				
Ethylene < 3 ppm								
Isobutane < 525 ppm								
Isobutylene < 10 ppm								
Isopentane < 5 ppm								
Methane < 1 ppm								
Nitrogen < 40 ppm								
Oxygen < 20 ppm								
Pentane < 3 ppm								
Propane < 36 ppm								
Propylene < 5 ppm								
Sulfur < 1 ppm								
Water < 3 ppm								
<i>A Certificate of Analysis is available on request at a nominal charge.</i>								
<i>Analysis for sulfurs, alcohols, and hydrides can be done on a custom basis. Please inquire for more information.</i>								
n-Butane, Ultra High Purity 99.85%	G1905006	1F	120 lb	54.43 kg	Single Stage Reg. Tee Purge LB Regulator Detector Tube Outlet Plug Wrench Flash Arrestor	Series 3530-510 4753-510 Series 3550-180 8014-221SA TW-4* 6103A-F		
<i>Typical Analysis</i>	G1905001	1A	40 lb	18.14 kg				
1,3 Butadiene < 5 ppm	G1905040	2	16 lb	7.26 kg				
1-Butene < 100 ppm	G1905050	3	6 lb	2.72 kg				
2-Butene < 150 ppm	G1905065	4	2 lb	0.91 kg				
Ethane < 5 ppm	G1905078	6	0.88 lb	400 gm				
Ethylene < 5 ppm	G1905081	7	0.44 lb	200 gm				
Isobutane < 760 ppm	G1905075	LB	0.375 lb	170 gm				
Methane < 2 ppm								
Pentane < 5 ppm								
Propane < 150 ppm								
Propylene < 10 ppm								
Water < 5 ppm								
<i>A lot analysis will be provided with each order. Please inquire for individual cylinder analysis.</i>								
<i>*Except LB</i>								
n-Butane, Instrument Purity 99.5%	G2423106	1F	120 lb	54.43 kg	Single Stage Reg. Tee Purge LB Regulator Detector Tube Outlet Plug Wrench Flash Arrestor	Series 3530-510** 4753-510 Series 3550-180** 8014-221SA TW-4* 6103A-F		
Air < 0.05 %	G2423140	2	16 lb	7.26 kg				
	G2423150	3	6 lb	2.72 kg				
	G2423165	4	2 lb	0.91 kg				
	G2423175	LB	0.375 lb	170 gm				
<i>LPG 5 and 10 gallon steel cylinders available with single or dual port CGA510 valves, FLET, and head pressure. Inquire.</i>								
<i>A Certificate of Conformance will be provided on request.</i>								
<i>A lot analysis is available at a nominal charge.</i>								
<i>By request, all except LB can be supplied with full length eductor tubes for liquid withdrawal.</i>								
<i>*Except LB</i>								
<i>**Regulators for gas phase only</i>								
n-Butane, CP Grade 99%	G1317206	1F	120 lb	54.43 kg	Single Stage Reg. Tee Purge LB Regulator Detector Tube Outlet Plug Wrench Flash Arrestor	Series 18-510** 4753-510 Series 3320-180** 8014-221SA TW-4* 6103A-F		
	G1317201	1A	40 lb	18.14 kg				
	G1317240	2	16 lb	7.26 kg				
	G1317250	3	6 lb	2.72 kg				
	G1317265	4	2 lb	0.91 kg				
	G1317275	LB	0.375 lb	170 gm				
<i>LPG 5 and 10 gallon steel cylinders available with single or dual port CGA510 valves, FLET, and head pressure. Inquire.</i>								
<i>Liquid phase, weight/weight%</i>								
<i>A Certificate of Conformance will be provided on request.</i>								
<i>By request, all except LB can be supplied with full length eductor tubes for liquid withdrawal.</i>								
<i>*Except LB</i>								
<i>**Regulators for gas phase only</i>								