



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: 1.8%
UFL in Air: 8.4%
Permissible Exposure Limit (TLV): 1000 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 | Metric | Equipment Recommendations | Model No. | Page No. | | | |
|---|--------------|---------------|------------|----------|---|---|---|--|--|--|
| n-Butane, Research Purity 99.99% | G2208106 | 1F | 120 lb | 54.43 kg | Single Stage Reg. Tee Purge LB Regulator Personal Monitor Detector Tube Outlet Plug Wrench Flash Arrestor | Series 3530-510 4753-510 Series 3550-180 IQ250 8014-221SA TW-4 6103A-F | 313 423 314 398 391 430 434 | | | |
| <i>Typical Analysis (mol/mol units)</i> | G2208101 | 1A | 40 lb | 18.14 kg | | | | | | |
| <i>Liquid Phase Analysis</i> | G2208140 | 2 | 16 lb | 7.26 kg | | | | | | |
| Nitrogen < 20 ppm | G2208150 | 3 | 6 lb | 2.72 kg | | | | | | |
| Oxygen < 5 ppm | G2208165 | 4 | 2 lb | 0.91 kg | | | | | | |
| Other Hydrocarbons < 90 ppm | G2208178 | 6 | 0.88 lb | 400 gm | | | | | | |
| Sulfur < 1 ppm | G2208181 | 7 | 0.44 lb | 200 gm | | | | | | |
| 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, Matheson Purity 99.95% | G1813006 | 1F | 120 lb | 54.43 kg | Single Stage Reg. Tee Purge LB Regulator Personal Monitor Detector Tube Outlet Plug Wrench Flash Arrestor | Series 3530-510 4753-510 Series 3550-180 IQ250 8014-221SA TW-4 6103A-F | 313 423 314 398 391 430 434 | | | |
| <i>Typical Analysis (mol/mol units)</i> | G1813001 | 1A | 40 lb | 18.14 kg | | | | | | |
| <i>Liquid Phase Analysis</i> | G1813040 | 2 | 16 lb | 7.26 kg | | | | | | |
| Nitrogen < 40 ppm | G1813050 | 3 | 6 lb | 2.72 kg | | | | | | |
| Oxygen < 10 ppm | G1813065 | 4 | 2 lb | 0.91 kg | | | | | | |
| Other Hydrocarbons < 500 ppm | G1813078 | 6 | 0.88 lb | 400 gm | | | | | | |
| Sulfur < 1 ppm | G1813081 | 7 | 0.44 lb | 200 gm | | | | | | |
| 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 99.9% | G1905006 | 1F | 120 lb | 54.43 kg | Single Stage Reg. Tee Purge LB Regulator Personal Monitor Detector Tube Outlet Plug Wrench Flash Arrestor | Series 3530-510 4753-510 Series 3550-180 IQ250 8014-221SA TW-4* 6103A-F | 313 423 314 398 391 430 434 | | | |
| <i>Typical Analysis (mol/mol units)</i> | G1905001 | 1A | 40 lb | 18.14 kg | | | | | | |
| <i>Liquid Phase Analysis</i> | G1905040 | 2 | 16 lb | 7.26 kg | | | | | | |
| Nitrogen < 100 ppm | G1905050 | 3 | 6 lb | 2.72 kg | | | | | | |
| Oxygen < 20 ppm | G1905065 | 4 | 2 lb | 0.91 kg | | | | | | |
| Other Hydrocarbons < 900 ppm | G1905078 | 6 | 0.88 lb | 400 gm | | | | | | |
| Sulfur < 1 ppm | G1905081 | 7 | 0.44 lb | 200 gm | | | | | | |
| Water < 4 ppm | G1905075 | LB | 0.375 lb | 170 gm | | | | | | |
| <i>A lot analysis will be provided with each order. Please inquire for individual cylinder analysis.</i> | | | | | | | | | | |
| <i>*Except LB</i> | | | | | | | | | | |



n-Butane (continued)

| Gas Grade Purity Specifications | Product Code | Cylinder Size | US | Content Metric | Equipment Recommendations | Model No. | Page No. |
|---|--------------|---------------|----------|----------------|---------------------------|-------------------|----------|
| n-Butane, Instrument Purity 99.5% Air < 0.05 % | G2423106 | 1F | 120 lb | 54.43 kg | Single Stage Reg. | Series 3530-510** | 313 |
| | G2423140 | 2 | 16 lb | 7.26 kg | Tee Purge | 4753-510 | 423 |
| | G2423150 | 3 | 6 lb | 2.72 kg | LB Regulator | Series 3550-180** | 314 |
| | G2423165 | 4 | 2 lb | 0.91 kg | Personal Monitor | IQ250 | 398 |
| | G2423175 | LB | 0.375 lb | 170 gm | Detector Tube | 8014-221SA | 391 |
| | | | | | Outlet Plug Wrench | TW-4* | 430 |
| | | | | | Flash Arrestor | 6103A-F | 434 |
| <p>LPG 5 and 10 gallon steel cylinders available with single or dual port CGA510 valves, FLET, and head pressure. Inquire. A Certificate of Conformance will be provided on request. A lot analysis is available at a nominal charge. By request, all except LB can be supplied with full length eductor tubes for liquid withdrawal. *Except LB **Regulators for gas phase only</p> | | | | | | | |
| n-Butane, CP Grade 99% | G1317206 | 1F | 120 lb | 54.43 kg | Single Stage Reg. | Series 18-510** | 292 |
| | G1317201 | 1A | 40 lb | 18.14 kg | Tee Purge | 4753-510 | 423 |
| | G1317240 | 2 | 16 lb | 7.26 kg | LB Regulator | Series 3320-180** | 302 |
| | G1317250 | 3 | 6 lb | 2.72 kg | Personal Monitor | IQ250 | 398 |
| | G1317265 | 4 | 2 lb | 0.91 kg | Detector Tube | 8014-221SA | 391 |
| | G1317275 | LB | 0.375 lb | 170 gm | Outlet Plug Wrench | TW-4* | 430 |
| | | | | | Flash Arrestor | 6103A-F | 434 |
| <p>LPG 5 and 10 gallon steel cylinders available with single or dual port CGA510 valves, FLET, and head pressure. Inquire. Liquid phase, weight/weight% A Certificate of Conformance will be provided on request. By request, all except LB can be supplied with full length eductor tubes for liquid withdrawal. *Except LB **Regulators for gas phase only</p> | | | | | | | |