



Ethylene

Description

Synonym: Ethene
Formula: C₂H₄

Gas Data

Molecular Weight: 28.05
Density: 1.26 kg/m³ @ 0°C, 101.325 kPa
0.0787 lb/ft³ @ 32°F, 14.696 psia
Specific Volume: 0.793 m³/kg @ 0°C, 101.325 kPa
12.7 ft³/lb @ 32°F, 14.696 psia

Safety Information

LFL in Air: 2.7%
UFL in Air: 36%

Shipping Information

CAS Registry Number: 74-85-1
UN Number: UN 1962
ECCN Number: 1C982
DOT Proper Shipping Name: Ethylene, Compressed
DOT Classification: 2.1 (Flammable Gas)
DOT Label: FLAMMABLE GAS
TC Shipping Name: Ethylene, Compressed
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 |
|---------------|----------------------|----------------------|-----------------------|----------------------------|----|
| 1A | 350 | 1,200 | 8,274 | 152 | 69 |
| 1R | 350 | 1,200 | 8,274 | 67 | 30 |
| 2 | 350 | 1,200 | 8,274 | 75 | 34 |
| 3 | 350 | 1,200 | 8,274 | 34 | 16 |
| 6 | 350 | 1,200 | 8,274 | 5 | 2 |
| 7 | 350 | 1,200 | 8,274 | 6 | 3 |
| LB | 170 | 1,200 | 8,274 | 6 | 3 |

| Gas Grade Purity Specifications | Product Code | Cylinder Size | Content US | Metric | Equipment Recommendations | Model No. | Page No. |
|--|--------------|---------------|------------|----------|---------------------------|-----------------|----------|
| Ethylene, Research Purity 99.999% | G2250101 | 1A | 30 lb | 13.61 kg | Dual Stage Reg. | Series 3120-350 | 299 |
| <i>Typical Analysis (mol/mol units)</i> | G2250118 | 1R | 18 lb | 8.16 kg | Single Stage Reg. | Series 3530-350 | 313 |
| Acetylene < 2 ppm | G2250140 | 2 | 11 lb | 4.99 kg | LB Regulator | Series 3550-170 | 314 |
| Carbon Dioxide < 2 ppm | G2250150 | 3 | 4.5 lb | 2.04 kg | Tee Purge | 4753-350 | 423 |
| Carbon Monoxide < 2 ppm | G2250178 | 6 | 0.62 lb | 280 gm | Personal Monitor | IQ250 | 398 |
| Nitrogen < 2 ppm | G2250181 | 7 | 0.31 lb | 140 gm | Leak Detector | 8057 | 402 |
| Oxygen < 2 ppm | | | | | Detector Tube | 8014-108B | 391 |
| Other Hydrocarbons < 8 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> | | | | | | | |
| <i>Not for use as a plant growth regulator.</i> | | | | | | | |
| Ethylene, Matheson Purity 99.995% | G1827901 | 1A | 30 lb | 13.61 kg | Dual Stage Reg. | Series 3120-350 | 299 |
| <i>Typical Analysis (mol/mol units)</i> | G1827918 | 1R | 18 lb | 8.16 kg | Single Stage Reg. | Series 3530-350 | 313 |
| Acetylene < 4 ppm | G1827940 | 2 | 11 lb | 4.99 kg | LB Regulator | Series 3550-170 | 314 |
| Carbon Dioxide < 5 ppm | G1827950 | 3 | 4.5 lb | 2.04 kg | Tee Purge | 4753-350 | 423 |
| Carbon Monoxide < 2 ppm | G1827978 | 6 | 0.62 lb | 280 gm | Personal Monitor | IQ250 | 398 |
| Nitrogen < 5 ppm | G1827981 | 7 | 0.31 lb | 140 gm | Leak Detector | 8057 | 402 |
| Oxygen < 2 ppm | | | | | Detector Tube | 8014-108B | 391 |
| Other Hydrocarbons < 80 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> | | | | | | | |
| <i>Not for use as a plant growth regulator.</i> | | | | | | | |



Ethylene (continued)

| Gas Grade Purity Specifications | Product Code | Cylinder Size | Content US | Content Metric | Equipment Recommendations | Model No. | Page No. |
|--|--------------|---------------|------------|----------------|---------------------------|-----------------|----------|
| Ethylene, Ultra High Purity 99.95% | G1920801 | 1A | 30 lb | 13.61 kg | Dual Stage Reg. | Series 3120-350 | 299 |
| <i>Typical Analysis</i> | G1920818 | 1R | 18 lb | 8.16 kg | Single Stage Reg. | Series 3530-350 | 313 |
| Carbon Dioxide < 10 ppm | G1920840 | 2 | 11 lb | 4.99 kg | LB Regulator | Series 3550-170 | 314 |
| Ethane < 300 ppm | G1920850 | 3 | 4.5 lb | 2.04 kg | Tee Purge | 4753-350 | 423 |
| Oxygen < 10 ppm | G1920878 | 6 | 0.62 lb | 280 gm | Personal Monitor | IQ250 | 398 |
| Propane < 10 ppm | G1920881 | 7 | 0.31 lb | 140 gm | Leak Detector | 8057 | 402 |
| Propylene < 50 ppm | G1920875 | LB | 0.25 lb | 113 gm | Detector Tube | 8014-108B | 391 |
| Water < 5 ppm | | | | | | | |
| <i>A lot analysis will be provided with each cylinder. Please inquire for individual cylinder analysis.</i> | | | | | | | |
| <i>Analysis for sulfurs, alcohols and hydrides can be done on a custom basis. Please inquire for more information.</i> | | | | | | | |
| <i>Not for use as a plant growth regulator.</i> | | | | | | | |
| Ethylene, Polymer Purity 99.9% | G1358401 | 1A | 30 lb | 13.61 kg | Dual Stage Reg. | Series 3120-350 | 299 |
| <i>Typical Analysis</i> | G1358440 | 2 | 11 lb | 4.99 kg | Single Stage Reg. | Series 3530-350 | 313 |
| Oxygen < 10 ppm | G1358450 | 3 | 4.5 lb | 2.04 kg | LB Regulator | Series 3550-170 | 302 |
| Water < 5 ppm | G1358475 | LB | 0.25 lb | 113 gm | Tee Purge | 4753-350 | 423 |
| | | | | | Personal Monitor | IQ250 | 398 |
| | | | | | Leak Detector | 8057 | 402 |
| | | | | | Detector Tube | 8014-108B | 391 |
| <i>A Certificate of Conformance will be provided upon request.</i> | | | | | | | |
| <i>A lot analysis is available at a nominal charge.</i> | | | | | | | |
| <i>Not for use as a plant growth regulator.</i> | | | | | | | |
| Ethylene, CP Grade 99.5% | G1358201 | 1A | 30 lb | 13.61 kg | Dual Stage Reg. | Series 1250-350 | 296 |
| | G1358240 | 2 | 11 lb | 4.99 kg | Single Stage Reg. | Series 3530-350 | 313 |
| | G1358250 | 3 | 4.5 lb | 2.04 kg | LB Regulator | Series 3550-170 | 314 |
| | G1358275 | LB | 0.25 lb | 113 gm | Tee Purge | 4753-350 | 423 |
| | | | | | Personal Monitor | IQ250 | 398 |
| | | | | | Leak Detector | 8057 | 402 |
| | | | | | Detector Tube | 8014-108B | 391 |
| <i>A Certificate of Conformance will be provided on request.</i> | | | | | | | |
| <i>Not for use as a plant growth regulator.</i> | | | | | | | |

⚠WARNING: This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.