

## Hydrogen

A colorless, odorless, flammable gas.

| Technical Information: |   |
|------------------------|---|
| Chemical Symbol:       | H <sub>2</sub>                                    |
| Molecular Weight:      | 2.02  |
| Specific Volume        | 192 ft <sup>3</sup> /lb (11.9 m <sup>3</sup> /kg) |
| CAS Registry Number:   | 1333-74-0   |

| Shipping Information: |                      |
|-----------------------|----------------------|
| DOT Proper Name:      | Hydrogen, Compressed |
| Hazard Class:         | 2.1                  |
| I.D. Number:          | UN 1049              |
| Labels:               | Flammable Gas        |

| Grade                                     | Part No.   | Purity   | Impurity  | Specification  | Equipment Recommended                       |
|---|------------|----------|---|--|---|
| <b>PurityPlus 6.0 (Research)</b>          | HYD-60-XXX | 99.9996% | Oxygen<br>Water<br>Nitrogen<br>THC<br>CO/CO <sub>2</sub>                    | < 0.2 ppm<br>< 0.5 ppm<br>< 0.3 ppm<br>< 0.1 ppm<br>< 0.1 ppm          | 300 series brass regulator<br>see page 4.12 |
| <b>PurityPlus 5.5 (Chromatograph)</b>     | HYD-55-XXX | 99.9995% | Oxygen<br>Water<br>Nitrogen<br>Methane<br>Carbon Dioxide<br>Carbon Monoxide | < 0.5 ppm<br>< 2 ppm<br>< 2 ppm<br>< 0.2 ppm<br>< 0.1 ppm<br>< 0.2 ppm | 300 series brass regulator<br>see page 4.12 |
| <b>PurityPlus 5.0 (Ultra High Purity)</b> | HYD-50-XXX | 99.999%  | Oxygen<br>Moisture<br>Nitrogen<br>Total Hydrocarbons                        | < 1 ppm<br>< 1 ppm<br>< 5 ppm<br>< 0.5 ppm                             | 300 series brass regulator<br>see page 4.12 |
| <b>PurityPlus Zero 4.5</b>                | HYD-45-XXX | 99.995%  | Total Hydrocarbons  | < 0.5 ppm  | 300 series brass regulator<br>see page 4.12 |
| <b>PurityPlus 4.0 (Prepurified)</b>       | HYD-40-XXX | 99.99%   | Moisture<br>Oxygen  | < 10 ppm<br>< 20 ppm   | 300 series brass regulator<br>see page 4.12 |

XXX - Complete the part number with the desired cylinder size listed below. (ie. HYD-50-300)

| Standard Cylinder Sizes * | Contents ft <sup>3</sup> /m <sup>3</sup> | Cylinder Pressure PSIG | CGA Valve Connection |
|---------------------------|--|------------------------|----------------------|
| 300                       | 261                                      | 2400                   | 350                  |
| 200                       | 195                                      | 2000                   | 350                  |
| 80                        | 71                                       | 2000                   | 350                  |

\*Nonstandard cylinder sizes available upon request