

# PURE GASES

## HYDROGEN SELENIDE H<sub>2</sub>Se

- See Electronic Gas Section page 94 -

## HYDROGEN SULFIDE H<sub>2</sub>S

**General Characteristics:** A colorless, flammable and liquefied gas with a detectable odor.

**Health Hazards:** Toxic. Causes headaches, discomfort, diarrhea and breathing paralysis. Warning: the sense of smell is anesthetized quickly by hydrogen sulfide.

| GAS GRADE/PURITY SPEC.                               | CYLINDER SIZE | CONTENTS | EQUIPMENT RECOMMENDATIONS  |
|--|---------------|----------|--|
| <b>C.P.</b><br>Min. Purity 99.5%<br>(Liquid Phase)   | 044           | 27.2 kg  | Stainless-steel high purity single-stage regulator,<br>refer to page 142<br><br>Stainless-steel lecture bottle regulator,<br>refer to page 147 |
|  | 016           | 9.1 kg   |  |
|  | 010           | 5.0 kg   |  |
|  | LB            | 227 g    |  |
| <b>TECHNICAL</b><br>Min. Purity 99.0% (Liquid Phase) | 044           | 27.2 kg  |  |
|  | 016           | 9.1 kg   |  |

### TECHNICAL INFORMATION

|                       |                          |                               |                             |
|-----------------------|--------------------------|-------------------------------|-----------------------------|
| Molecular Weight..... | 34.1                     | Dot Name.....                 | Hydrogen Sulfide, Liquefied |
| Specific Volume.....  | 11.2CF/lb                | UN No.....                    | UN1053                      |
| Fire Potential.....   | 4.0 - 44% in Air         | Dot Class.....                | 2.3                         |
| TLV-TWA.....          | 10 ppm (ACGIH 1991-1992) | Dot Label.....                | Poison Gas, Flammable Gas   |
| CGA Valve.....        | 330                      | Cas Registry.....             | 7783-06-4                   |
| LB.....               | 180                      | Cylinder Pressure @ 70°F..... | 252 psig                    |

## ISOBUTANE i-C<sub>4</sub>H<sub>10</sub>

**General Characteristics:** A colorless, flammable and liquefied gas with a faint odor.

**Health Hazards:** A simple asphyxiant.

| GAS GRADE/PURITY SPEC.   | CYLINDER SIZE | CONTENTS | EQUIPMENT RECOMMENDATIONS  |
|--|---------------|----------|--|
| <b>RESEARCH</b><br>Min. Purity 99.99%<br>CO <sub>2</sub> < 10 ppm, H <sub>2</sub> O < 5 ppm,<br>N <sub>2</sub> < 10 ppm, O <sub>2</sub> < 10 ppm,<br>Other HC < 50 ppm | 18 LP         | 7.7 kg   | Single-stage high purity regulator,<br>refer to page 140<br><br>High purity lecture bottle regulator,<br>refer to page 146 |
|  | 010           | 3.5 kg   |  |
|  | LB            | 170 g    |  |
| <b>INSTRUMENTAL</b><br>Min. Purity 99.5% (Liquid Phase)  | 110 LP        | 52.7 kg  |  |
|  | 18 LP         | 7.7 kg   |  |
|  | 010           | 3.5 kg   |  |
| <b>C.P.</b><br>Min. Purity 99.0% (Liquid Phase)  | 110 LP        | 52.7 kg  |  |
|  | 18 LP         | 7.7 kg   |  |
|  | 010           | 3.5 kg   |  |
|  | LB            | 170 g    |  |

### TECHNICAL INFORMATION

|                       |                   |                               |               |
|-----------------------|-------------------|-------------------------------|---------------|
| Molecular Weight..... | 58.12             | Dot Name.....                 | Isobutane     |
| Specific Volume.....  | 6.5CF/lb          | UN No.....                    | UN1969        |
| Fire Potential.....   | 1.8 - 8.4% in Air | Dot Class.....                | 2.1           |
| TLV-TWA.....          | None established  | Dot Label.....                | Flammable Gas |
| CGA Valve.....        | 510               | Cas Registry.....             | 75-28-5       |
| LB.....               | 180               | Cylinder Pressure @ 70°F..... | 31 psig       |