

# PURE GASES

## PHOSGENE COCl<sub>2</sub>

**General Characteristics:** A colorless, non-flammable and liquefied gas with an odor similar to moist hay.

**Health Hazards:** Highly toxic. Causes serious lung damage with delayed effect even with concentrations below the odor threshold.

| GAS GRADE/PURITY SPEC.                          | CYLINDER SIZE | CONTENTS | EQUIPMENT RECOMMENDATIONS                                             |
|-------------------------------------------------|---------------|----------|-----------------------------------------------------------------------|
| <b>C.P.</b><br>Min. Purity 99.0% (Liquid Phase) | 002           | 1.0 kg   | Stainless-steel high purity single-stage regulator, refer to page 142 |

### TECHNICAL INFORMATION

|                       |                           |                               |            |
|-----------------------|---------------------------|-------------------------------|------------|
| Molecular Weight..... | 98.92                     | Dot Name.....                 | Phosgene   |
| Specific Volume.....  | 3.9CF/lb                  | UN No.....                    | UN1076     |
| Fire Potential.....   | Non-flammable             | Dot Class.....                | 2.3        |
| TLV-TWA.....          | 0.1 ppm (ACGIH 1991-1992) | Dot Label.....                | Poison Gas |
| CGA Valve.....        | 660                       | Cas Registry.....             | 75-44-5    |
| LB.....               | N/A                       | Cylinder Pressure @ 70°F..... | 10.7 psig  |

## PHOSPHINE PH<sub>3</sub>

- See Electronic Gas Section page 101 -

## PROPANE C<sub>3</sub>H<sub>8</sub>

**General Characteristics:** A colorless, flammable, liquefied and odorless gas.

**Health Hazards:** A simple asphyxiant.

| GAS GRADE/PURITY SPEC.                                                                                                                                                           | CYLINDER SIZE         | CONTENTS                   | EQUIPMENT RECOMMENDATIONS                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>RESEARCH</b><br>Min. Purity 99.99% (Liquid Phase)<br>O <sub>2</sub> < 2 ppm, N <sub>2</sub> < 10 ppm, H <sub>2</sub> O < 1 ppm,<br>CO <sub>2</sub> < 2 ppm, Other HC < 50 ppm | 110 LP<br>18 LP<br>LB | 45.4 kg<br>9.1 kg<br>170 g | Single-stage high purity regulator, refer to page 140<br><br>High purity lecture bottle regulator, refer to page 146 |
| <b>INSTRUMENTAL</b><br>Min. Purity 99.5% (Liquid Phase)                                                                                                                          | 110 LP<br>18 LP<br>LB | 45.4 kg<br>9.1 kg<br>170 g |                                                                                                                      |
| <b>C.P.</b><br>Min. Purity 99.0% (Liquid Phase)                                                                                                                                  | 110 LP<br>18 LP<br>LB | 45.4 kg<br>9.1 kg<br>170 g |                                                                                                                      |

### TECHNICAL INFORMATION

|                       |                   |                               |               |
|-----------------------|-------------------|-------------------------------|---------------|
| Molecular Weight..... | 44.11             | Dot Name.....                 | Propane       |
| Specific Volume.....  | 8.5CF/lb          | UN No.....                    | UN1978        |
| Fire Potential.....   | 2.1 - 9.5% in Air | Dot Class.....                | 2.1           |
| TLV-TWA.....          | None established  | Dot Label.....                | Flammable Gas |
| CGA Valve.....        | 510               | Cas Registry.....             | 74-98-6       |
| LB.....               | 180               | Cylinder Pressure @ 70°F..... | 109 psig      |