

# ELECTRONIC GASES

## ION IMPLANTATION GASES

Many materials have been used in the ion implantation process. The gases shown below are those that have developed routine usage as this technology evolved.

| Specifications                                                |         |                         |       |     |
|---------------------------------------------------------------|---------|-------------------------|-------|-----|
| GAS or MIXTURE<br>PURITY SPECIFICATIONS                       | CONTENT | PRESSURE<br>PSIG    kPa |       | CGA |
| Arsenic Pentafluoride<br>98.0% min.                           | 50 gm   | 228                     | 1,572 | 660 |
| Arsine<br>99.9995% min.                                       | 30 gm   | 205                     | 1,410 | 350 |
| 5, 10, or 15% Arsine                                          | 24 ltrs | 800                     | 5,510 | 350 |
| Balance Hydrogen UHP<br>99.995% mins                          | 21 ltrs | 400                     | 2,760 | 350 |
| Boron Trichloride<br>99.9% min.                               | 454 gm  | 4.4                     | 30    | 660 |
| Boron Trifluoride<br>99.5% min.                               | 70 gm   | 800                     | 5,510 | 330 |
|                                                               | 35 gm   | 400                     | 2,760 |     |
| Boron-11 Trifluoride<br>96% B-11 enriched                     | 70 gm   | 800                     | 5,510 | 330 |
|                                                               | 35 gm   | 400                     | 2,760 | 330 |
| Boron-11 Trifluoride<br>98% B-11 enriched                     | 70 gm   | 800                     | 5,510 | 330 |
|                                                               | 35 gm   | 400                     | 2,760 | 330 |
| Germane<br>99.99% min.                                        | 7 gm    | 52                      | 359   | 350 |
| Hydrogen Sulfide<br>99.5% min. (liquid phase)                 | 100 gm  | 252                     | 1,720 | 330 |
| Phosphine<br>99.999% min.                                     | 17 gm   | 252                     | 1,720 | 350 |
| 5, 10, 15% Phosphine<br>Balance Hydrogen UHP<br>99.9995% min. | 24 ltrs | 800                     | 5,510 | 350 |
|                                                               | 12 ltrs | 400                     | 2,760 | 350 |
| Phosphorous Pentafluoride<br>99.0% min.                       | 47 gm   | 290                     | 2,000 | 330 |
| Silane<br>99.995% min.                                        | 17 gm   | 400                     | 2,760 | 350 |
| Silicon Tetrafluoride<br>99.99% min. (liquid phase)           | 105 gm  | 800                     | 5,510 | 330 |
| all of above are in size 7X cylinders                         |         |                         |       |     |