GERMANE GeH_4 MIXTURES

Germane can be diluted with argon, helium, hydrogen or nitrogen in order to provide concentrations of less than 100%. Using Germane in this form can add an additional degree of control to the process, particularly when relatively small amounts of germanium are to be deposited.

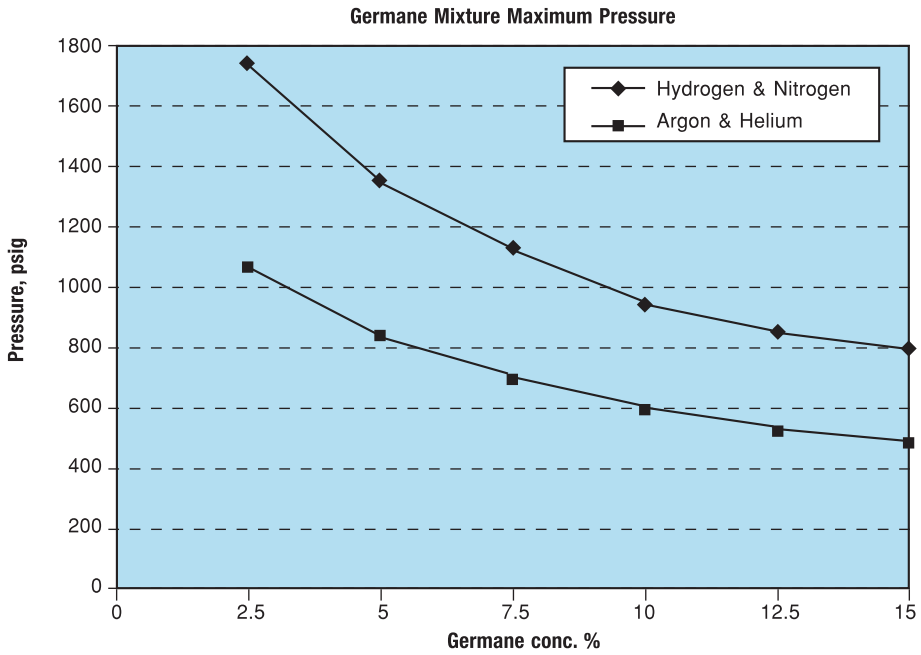
Container Information

CYLINDER CONNECTION: CGA-350
DOPING CONCENTRATIONS can be mixed with UHP or VLSI grade balance gases

Germane Concentration	Cylinder Size	Pressure psig	Argon		Helium		Hydrogen		Nitrogen	
			ft^3	m^3	ft^3	m^3	ft^3	m^3	ft^3	m^3
5ppm - 2%	044	1500	167	4.7	146	4.1	146	4.1	156	4.4
	016	1500	63	1.8	55	1.6	55	1.6	58	1.7

The pressures of higher concentration mixtures are lower than those shown above. This is due to safety concerns. Germane is potentially unstable, and the cylinder is filled only with an amount of Germane such that, if it spontaneously decomposed, the cylinder would be able to safety contain the heat and pressure.

SHELF LIFE: 6 months



DOT Shipping Information

HYDROGEN BALANCE

Conc	Shipping Name	Shipping Papers	Shipping Labels
>62.2%	__% Germane/Hydrogen Mixture Inhalation Hazard	Compressed Gases, toxic, flammable, nos (__% Germane/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone B	Poison Gas Flammable Gas
62.2% - 20.7%	__% Germane/Hydrogen Mixture Inhalation Hazard	Compressed Gases, toxic, flammable, nos (__% Germane/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone C	Poison Gas Flammable Gas
20.7% - 12.44%	__% Germane/Hydrogen Mixture Inhalation Hazard	Compressed Gases, toxic, flammable, nos (__% Germane/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone D	Poison Gas Flammable Gas
<12.44%	__% Germane/Hydrogen Mixture Inhalation Hazard	Compressed Gases, toxic, flammable, nos (__% Germane/Hydrogen Mixture) 2.1 UN 1954	Flammable Gas