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.

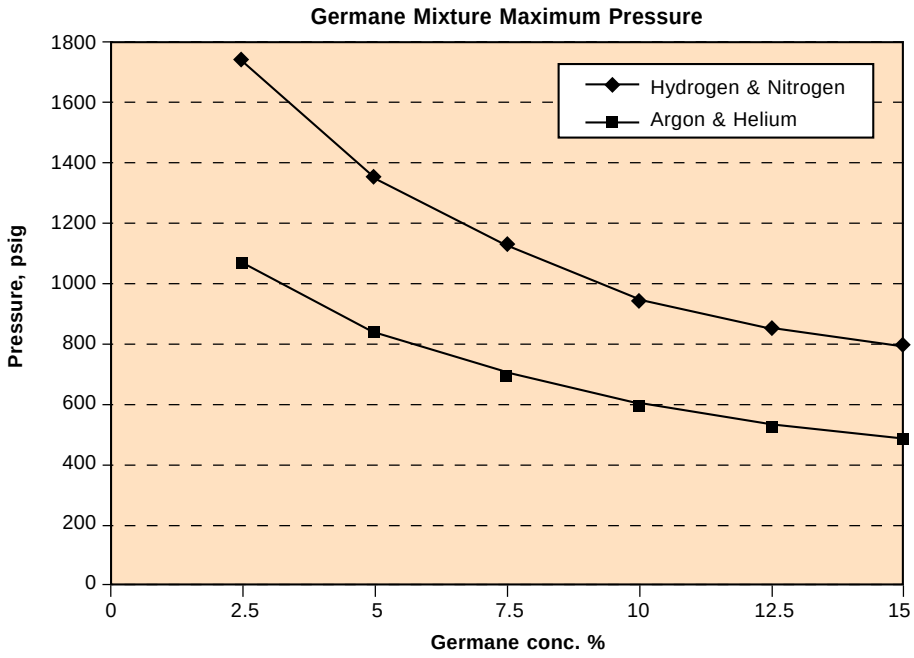
Container Information

CYLINDER CONNECTION: std: 350 opt: DISS-632
DOPING CONCENTRATIONS can be mixed with UHP or Megabit grade balance gases

Germane concentration	Cylinder size	Pressure (psig)	Argon ft³	Argon m³	Helium ft³	Helium m³	Hydrogen ft³	Hydrogen m³	Nitrogen ft³	Nitrogen m³
5 ppm - 0.5%	049	2100	270	7.64	235	6.65	235	6.65	250	7.08
	044	1800	200	5.66	175	4.95	175	4.95	187	5.30
	016	1800	75	2.12	66	1.87	66	2.12	70	1.98
	008	1800	34	0.97	31	0.87	31	0.87	33	0.92

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 safely 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/Hydrogn Mixture Inhalation Hazard	Compressed Gases, toxic, flammble, nos (__% Germane/Hydrogen Mixture) 2.3 UN 1954	Flammable Gas