

ELECTRONIC GASES

HYDROGEN SELENIDE H_2Se MIXTURES

Hydrogen Selenide can be diluted with argon, helium, hydrogen or nitrogen in order to provide concentrations of less than 100%. Using Hydrogen Selenide in this form can add an additional degree of control to the process, particularly when relatively small amounts of selenium are to be deposited. Mixtures are analyzed prior to shipment to ensure that the concentration is in the range requested. Hydrogen Selenide mixtures are prepared as ordered. Concentrations other than those listed below are available upon request.

Container Information

CYLINDER CONNECTION: std: CGA-350

DOPING CONCENTRATIONS can be mixed with UHP or VLSI grade balance gases

H ₂ Se concentration	Cylinder size	Pressure (psig)	Argon ft ³ m ³	Helium ft ³ m ³	Hydrogen ft ³ m ³	Nitrogen ft ³ m ³
10 ppm - 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 on higher concentration mixtures are lower than those shown above due to the fact that Hydrogen Selenide has a low vapor pressure. Only a maximum amount can be put into a cylinder to avoid liquefaction of the Hydrogen Selenide. To achieve higher concentrations, less balance gas is added.

SHELF LIFE: 2 years

DOT Shipping Information

HYDROGEN BALANCE

Conc	Shipping Name	Shipping Papers	Shipping Labels
>1%	___% Hydrogen Selenide/ Hydrogen Mixture, Inhalation Hazard	Compressed Gases, toxic, flammable, nos (___% Hydrogen Selenide/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone A	Poison Gas Flammable Gas
1% - 0.2%	___% Hydrogen Selenide/ Hydrogen Mixture, Inhalation Hazard	Compressed Gases, toxic, flammable, nos (___% Hydrogen Selenide/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone B	Poison Gas Flammable Gas
0.2% - 0.07%	___% Hydrogen Selenide/ Hydrogen Mixture, Inhalation Hazard	Compressed Gases, toxic, flammable, nos (___% Hydrogen Selenide/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone C	Poison Gas Flammable Gas
0.07% - 0.04%	___% Hydrogen Selenide/ Hydrogen Mixture, Inhalation Hazard	Compressed Gases, toxic, flammable, nos (___% Hydrogen Selenide/Hydrogen Mixture) 2.3 UN 1953 Poison Inhalation Hazard, Hazard Zone D	Poison Gas Flammable Gas
<400 ppm	___ppm Hydrogen Selenide/ Hydrogen Mixture	Compressed Gases, flammable, nos (___ppm Hydrogen Selenide/Hydrogen Mixture) 2.1 UN 1954	Flammable Gas

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