PHOSPHINE - (PH_3) — Phoenix - 5.5

DESCRIPTION : A colorless, poisonous, flammable, liquefied, high-pressure gas shipped at its vapor pressure of 40,8 Barg at 21° C **APPLICATIONS** : N-type dopant, for epitaxial silicon (usually ppm mixtures with hydrogen balance gas), for doping selected regions of a silicon wafer using deposition/diffusion techniques	to form such structures as emitters, source-drains, and collector contacts (usually high ppm to percentage mixtures with nitrogen); for doping polycrystalline silicon for interconnects or certain capacitors; for forming borophosphosilicate glasses (usually percentage mixtures with silane); and for ion implantation (usually 15 % PH_3 balance hydrogen mixtures in small cylinders)	**ADR Item No.** : 2, 2 TF **ADR** Label 2.3 Toxic gas Label 2.1 Flammable gas **MSDS REFERENCE** : 100 **CHEMICAL ABSTRACTS** : 7803-51-2 **UN No.** : 2199

PRODUCT		PRESSURE BARG	VALVE TYPE	VALVE OUTLET	VALVE MATERIALS OF CONSTRUCTION
CYLINDER	CONTENTS			DIN 477 No	
10H(A)	2,5 kg	40,8	Diaphragm	1	Stainless Steel
10H	4,5 kg	40,8	Diaphragm	1	Stainless Steel
50H	15 kg	40,8	Diaphragm	1	Stainless Steel

PRODUCT CHARACTERISTICS	PRAXAIR SPECIFICATIONS	METHOD OF ANALYSIS (SEE KEY)
MINIMUM PURITY	**99,9995 %**	
Argon + Oxygen ($Ar + O_2$)	≤ 1 ppm	S
Arsine (AsH_3)	≤ 0,1 ppm	O
Carbon Dioxide (CO_2)	≤ 0,1 ppm	S
Carbon Monoxide (CO)	≤ 0,1 ppm	S
C_2-C_5 Hydrocarbons	≤ 0,1 ppm	B
Methane (CH_4)	≤ 0,1 ppm	S
Nitrogen (N_2)	≤ 2 ppm	S
Water (H_2O)	≤ 1 ppm	E

Notes :

1. Assay is determined by the exclusion of hydrogen.

- Cylinder sizes, contents, valve types and valve connections other than those indicated above are available on request.
- All expressions for concentration are for gas phase, by volume unless otherwise noted.
- MSDS Ref.: More detailed Safety Information can be obtained from the Material Safety Data Sheet No. 100

Key to Analytical Techniques

A	Gas Chromatograph with Thermal Conductivity Detector	D	Specific Oxygen Analyzer	K	Gas Chromatograph - Photo Ionization	P	Gas Chromatograph with Methanizer Carbonizer
B	Gas Chromatograph with Flame Ionization Detector	E	Specific Water Analyzer	L	Gas Chromatograph - Flame Photometric	Q	Gas Chromatograph with Electrolytic Conductivity
C	Gas Chromatograph with Ultrasonic Detector	F	Total Hydrocarbon Analyzer	M	Mass Spectrometry	R	Gas Chromatograph with Reduction Gas Analyzer
		G	Infrared	N	Wet Chemical	S	Gaschromatograph with High Frequency Discharge Detector
		H	Proprietary	O	Gas Chromatograph with Discharge Ionization Detector		
		I	Gas Chromatograph with Helium Ionization Detector				
		J	Flame Ionization with Methanizer				

To ensure you have the latest available information, refer to this number when contacting your local Praxair office.

EG 71-5.5
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