

# ARSINE - (AsH<sub>3</sub>)

5.7

<b>DESCRIPTION :</b> A colorless, poisonous, flammable, liquefied, compressed gas shipped at its vapor pressure of 14 Barg at 21°C.	<b>APPLICATIONS :</b> Epitaxy for GaAs and other III-V, II-VI compound semiconductors, using either the Vapor Phase Epitaxy (VPE) or (more frequently) the Metal Organic Chemical Vapor Deposition (MOCVD) method.	Note: This product is manufactured to Phoenix Research standards, specifically for the production of III-V compounds. Consistently higher yields, measurably brighter devices, and an unmatched record of perfectly consistent product are some of the benefits reported by device manufacturers. GaAs films produced with Arsine 5.7 have yielded carrier concentrations of less than 5x10 <sup>12</sup> with mobilities exceeding 180.000.	<b>ADR Classification</b> : 2, 2 TF
			<b>ADR</b> Label 2.3 Toxic gas Label 2.1 Flammable gas
			<b>MSDS REFERENCE</b> : 005
			<b>CHEMICAL ABSTRACTS</b> : 7784-42-1
			<b>UN No.</b> : 2188

PRODUCT		PRESSURE BARG	VALVE TYPE	VALVE OUTLET DIN 477 No	VALVE MATERIALS OF CONSTRUCTION
CYLINDER	CONTENTS				
10HA	2,5 kg/5kg	14	Diaphragm	1	316L SS
50HA	20,4 kg	14	Diaphragm	1	316L SS

PRODUCT CHARACTERISTICS	PRAXAIR SPECIFICATIONS	METHOD OF ANALYSIS (SEE KEY)
<b>MINIMUM PURITY</b>	<b>99.9997 %</b>	
Argon + Oxygen (Ar + O <sub>2</sub> )	≤ 1 ppm	S
Carbon Dioxide (CO <sub>2</sub> )	≤ 0,05 ppm	S
Carbon Monoxide (CO)	≤ 0,05 ppm	S
C <sub>2</sub> -C <sub>5</sub> Hydrocarbons	≤ 0,05 ppm	B
Methane (CH <sub>4</sub> )	≤ 2 ppm	S
Nitrogen (N <sub>2</sub> )	≤ 1 ppm	S
Phosphine (PH <sub>3</sub> )	≤ 1 ppm	O
Silane (SiH <sub>4</sub> )	≤ 1 ppm	T
Germane (GeH <sub>4</sub> )	≤ 1 ppm	T
Water (H <sub>2</sub> O)	≤ 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. 005

Key to Analytical Techniques						
	D	Specific Oxygen Analyzer	K	Gas Chromatograph - Photo Ionization	P	Gas Chromatograph with Methanizer Carbonizer
	E	Specific Water Analyzer	L	Gas Chromatograph - Flame Photometric	Q	Gas Chromatograph with Electrolytic Conductivity
A	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
B	H	Proprietary	O	Gas Chromatograph with Discharge Ionization Detector	T	Gas Chromatograph with Atomic Emission Detector
	I	Gas Chromatograph with Helium Ionization Detector				
C	J	Flame Ionization with Methanizer				

**IMPORTANT**

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**EG 3-5.7  
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