

Argon

Colorless, nonflammable, inert gas. It acts as a simple asphyxiate by displacing air.

CAS Number	7440 - 37 - 1
UN Number	1951
Shipping Name	Argon, Refrigerated Liquid
Hazard Class	2.2
Label	Nonflammable Gas

Applications

Used in the lighting industry for filling bulbs and with combination of other rare gases for the filling of special bulbs and tubes for special color effects. The welding industry uses argon as a shielding gas to protect metal from oxidation during welding.

Used in various analytical instrument applications; Optical Spectrometry - Inductive Coupled Plasma, Graphite Furnace Atomic Absorption, Fourier Transform Infrared; Gas Chromatography - High Efficiency Discharge Detector, Ultrasonic detector, carrier gas when analyzing hydrogen in helium.

Physical Properties

Specific Gravity (70°F, 1 atm)	1,380
Specific Volume (70°F, 1 atm)	9.671 ft ³ /lb
Density of Saturated Vapor (1 atm)	0.3605 lb./ft ³
Ration of Specific Heats @ 86° F	1.669
Coefficient Viscosity (Microscopes @ 77°F)	
1 atm	227.8
Ionization Potential	15.7 Volts
Excitation Potentials (First Res. Pot.)	11.56 Volts
Metastable	11.66 Volts
Potentials.	11.49 Volts
Molecular Weight	39.948
Boiling Point (1 atm)	-302.6°F (-185.9°C)
Triple Point (1 atm)	-308.9°F (-189.4°C)
Liquid Density (SAT, 1 atm)	11.63 lb/gal
Critical Temperature	-188.1°F
Critical Pressure	711.5 psia
Specific Heat Capacity Cp @ 77°F	0.1244 BTU/lb
Latent Heat at Boiling Point (BTU/lb)	69.7
Thermal Conductivity Gas @ 0°C	0.0098 BTU/ft-hr-°F



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Argon *(continued)*

Argon Specifications (Units in ppm [v/v] unless shown otherwise)

Limiting Characteristics	Gaseous CGA G-11.1 Type II, Grade C	Liquid & MTG Typical
Argon Min. %	99.997	99.998
Water	10.5	3.5
Dewpoint, °F	-76	-90
Oxygen	5	2
Nitrogen	20	10
Hydrogen	1	1
Combined Total Hydrocarbons (as methane) and Carbon Dioxide	3	3

Conversion Data

	WEIGHT		GAS		LIQUID	
	POUNDS Lb	KILOGRAMS Kg	CUBIC FEET SCF	CUBIC METERS Nm ³	GALLONS Gal	LITERS L
1 Pound	1.0	0.4536	9.671	0.2543	0.08600	0.3255
1 Kilogram	2.205	1.0	21.32	0.5605	0.18957	0.7176
1 Ton	2000	907.2	19,342	508.6	172.0	651.0
1 SCF Gas	0.1034	0.04690	1.0	0.02628	0.008893	0.03366
1 Nm ³ Gas	3.933	1.7840	38.04	1.0	0.3382	1.2802
1 Gal Liquid	11.63	5.276	112.5	2.957	1.0	3.785
1 L Liquid	3.072	1.3936	29.71	0.7812	0.2642	1.0



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