

Krypton. Pure Gas.

Description

Krypton is a rare atmospheric gas which is odorless, colorless, tasteless, nontoxic, monatomic and chemically inert. The concentration of Krypton in the atmosphere by volume percent is 1.1×10^{-4} . Krypton is principally shipped and used in gaseous form for excimer lasers, light bulbs, window insulation and R & D laboratory research. Linde Gases Material Safety Data Sheets (MSDS) are available for Krypton gas and should be used as guidelines in regard to first aid, methods of storage, handling and general use of Krypton.

Purity specifications (Maximum impurity levels)*

Contaminant	Research Grade 99.999%	UHP Grade 99.995%
Argon (Ar)	2.0 ppm	2.0 ppm
Carbon Dioxide (CO ₂)	0.5 ppm	1.0 ppm
Carbon Tetrafluoride (CF ₄)	0.5 ppm	1.0 ppm
Hydrogen (H ₂)	0.5 ppm	2.0 ppm
Nitrogen (N ₂)	2.0 ppm	5.0 ppm
Oxygen (O ₂)	0.5 ppm	1.0 ppm
Water (H ₂ O)	0.5 ppm	1.0 ppm
Xenon	5.0 ppm	25.0 ppm
Total Hydrocarbon (THC) as Methan	0.5 ppm	N/A
Carbon Monoxide	1.0 ppm	N/A

*Higher purities are available upon request.

Cylinder information

Purity	Cylinder Size*	Valve Outlet*	Volume Liters	Gross Weight Lbs/Kg	Pressure Psig/Bar
Research Grade	300	580	10000	213/97	2300/160
	200	580	5000	155/70	1350/94
	80	580	2000	63/29	1500/104
	80	580	1000	31/14	1450/101
	811	580	500	16/7	2000/139
	LB	580/170	50	6/3	1400/98
UHP Grade	300	580	10000	213/97	2300/160
	200	580	5000	155/70	1350/94
	80	580	2000	63/29	1500/104
	80	580	1000	31/14	1450/101
	811	580	500	16/7	2000/139
	LB	580/170	50	6/3	1400/98
Non-Refillable Cylinders	320	580	400	16/7	1300/91
	330	580	200	11/5	1050/73
	330	580	100	10/5	575/41
	340	580	50	7/3	675/48
	340	580	25	6/3	350/25

*Additional cylinder sizes and/or valve outlets are available upon request.

Physical constants

Chemical name		Kr
Molecular weight		83.80
Density of the gas at 70°F (21,1°C), 1 atm		0.2172 lb/ft ³ , 3.479 kg/m ³
Specific gravity of the gas at 70°F (21,1°C), 1 atm		2.899
Specific volume of the gas at 70°F (21,1°C), 1 atm		4.604 ft ³ /lb, 0.287 m ³ /kg
Boiling point at 1 atm		-244.0°F, -153.4°C
Melting point at 1 atm		-251°F, -157°C
Critical temperature at 1 atm		-82.8°F, -63.8°C
Critical pressure		798.0 psia, 55.02 bar
Critical density		56.7 lb/ft ³ , 908 kg/m ³
Triple point		-251.3°F, -157.4°C
Latent heat of vaporization at normal boiling point		46.2 Btu/lb, 107.5 kJ/kg
Latent heat of fusion at triple point		8.41 Btu/lb, 19.57 kJ/kg
Specific heat of the gas at 70°F (21,1°C), 1 atm	C _p	0.060 Btu/(lb) (°F) 0.251 kJ/(kg) (°C)
	C _v	0.035 Btu/(lb) (°F) 0.146 kJ/(kg) (°C)

Shipping data

Synonyms		Kr
CAS Register Number		7439-90-9
DOT Classification		Nonflammable gas
DOT Label		Nonflammable gas
Transport Canada Classification		2.2
Substance Identification (SI)		1056
UN Number		UN 1056
Hazards		High Pressure and suffocation
Toxicity (TL V)		Asphyxiant
Flammability Range (in air)		Nonflammable gas
Odor		None

Linde Electronics and Specialty Gases

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