



**Making rare gases
readily available.**

Praxair provides premium quality, highly reliable rare gases to meet your exact requirements. We do this by sourcing our gases from a number of locations and industries, making certain we always have the supply you need. In addition, we use rigorous cylinder preparation procedures to ensure our gases remain pure and dependable long after our cylinders have shipped.

Our gases work in a number of applications including plasma displays, lighting and research among others. We offer special low levels of oxygen, moisture, hydrocarbons and other impurities for specific applications. Additionally, Praxair can supply mixtures of Xenon, Krypton and Neon with Oxygen, Nitrogen, Argon, Helium, Hydrogen and Halogen gases.

Markets we serve.

Lighting

Gases: Xenon, Krypton, Neon and mixtures with Bromodichloromethane (CHCl₂Br), Dibromomethane (CH₂Br₂), Hydrogen bromide (HBr), Methyl bromide (CH₃Br) and Methyl iodide (CH₃I)

Applications: Halogen for general lighting and automobiles, high-intensity discharge lighting for automobiles, fluorescent tubes and compact fluorescent lighting, incandescent bulbs

Benefits: Longer-life bulbs, lower energy use, higher light output, improved safety (auto)

Windows/Glass

Gases: Krypton and mixtures with Argon and Oxygen

Applications: Insulated double and triple pane

Benefits: Lower heat transfer, energy savings

Plasma Displays

Gases: Mixtures of Xenon, Neon, Helium

Applications: Plasma displays and televisions

Benefits: Improved luminescence, higher performance, lower energy use

Semiconductors

Gases: Xenon, Krypton, Neon and mixtures with Argon and Fluorine

Applications: Etching and laser lithography

Benefits: Increased transistor density, improved process yield

Research/Other

Pure and special mixtures of Xenon, Krypton and Neon

Mixture Specifications

We offer mixtures in the following specifications, as well as custom specifications upon request.

Grade	Mixture Component Range	Blend Tolerance	Analytical Uncertainty
Primary Standard	1 ppm - 9.9 ppm	±10%	±0.1 ppm
	10 ppm - 25 ppm	±10%	±1%
	25.1 ppm - 9999 ppm	±5%	±1%
	1.0% - 49.9%	±2%	±1% or 0.02% abs
Certified	1 ppm - 25 ppm	±20%	±5%
	25.1 ppm - 999 ppm	±10%	±2%
	0.1% - 49.9%	±5%	±2%

Standard Specifications – Pure Gases

	Neon Research	Krypton Research	Xenon Research	Xenon Aerospace
Assay	99.999%	99.999%	99.999%	99.9995%
Impurities in PPM				
Oxygen	1	2	1	0.1
Moisture	1	3	2	0.1
Nitrogen	5	5	5	1
Total Hydrocarbons	0.5	0.2	1	0.1
CO ₂	-	0.5	1	0.2
Ar+H ₂ +Kr	-	-	5	-
CF ₄	-	3	-	0.1
Argon	1	-	-	1
CO	-	-	-	0.2
Hydrogen	-	-	-	2
Krypton	-	-	-	2
Xe+Ar+H ₂	-	4	-	-
Helium	4	-	-	-

Cylinder Contents and Fill Pressures – Volume at 1 ATM and 70°F

	Neon Research Grade 99.999+%		Krypton Research Grade 99.999+%		Xenon Research Grade 99.999+%		Xenon Aerospace 99.9995+%	
	Contents (liters)	Pressure (PSIG)	Contents (liters)	Pressure (PSIG)	Contents (liters)	Pressure (PSIG)	Contents (liters)	Pressure (PSIG)
T	7,500	2,371	10,000	2,218	-	-	-	-
T	-	-	8,000	1,819	-	-	-	-
K	5,000	1,745	7,000	1,792	10,000	970	10,000	970
K	2,500	845	-	-	5,000	836	5,000	836
Q	1,500	1,545	2,000	1,557	1,000	655	1,000	655
D4	300	1,931	300	1,462	500	935	-	-
D4	-	-	-	-	300	858	-	-
D8	100	1,675	100	1,311	100	801	-	-
ELB	50	1,486	50	1,119	50	796	-	-
ELB	25	721	25	647	25	535	-	-

Special Packages

In addition to various cylinder sizes, Praxair also provides Neon in ISO modules filled to approximately 1.5 million liters and as a liquid in 30, 70 and 200 liter dewars.

Gas Handling Equipment

Praxair offers a complete line of premium quality gas handling equipment under the *ProStar*[®] Platinum brand name including pressure regulators, flow meters, scales and gas manifolds.

Pressure regulators for Xenon, Krypton and Neon

Regulator Recommendations	
Single Stage	PRS40023331-580
Two Stage	PRS40123331-580
Line	PRS40052001-000



Standard Cylinder Sizes

	T	K	Q	D4	D8	ELB
Specifications						
US DOT	3AA-2400	3AA-2015	3AA-2015	DOT-SP-10788NRC		
Transport Canada	3AAM (182)	3AAM (153)	3AAM (153)	3AAM (151.6)		
Internal Volume						
ft ³	1.73	1.54	0.52	0.084	0.0347	0.00265
Liters	49	43.6	14.7	2.38	0.983	0.5
Nominal Dimensions						
Diameter (in)	9.25	9.0	7.0	4.188	4.188	2.0
Diameter (cm)	23.50	22.86	17.78	10.64	10.64	5.08
Height (in)	55.0	51.0	31.0	14.25	7.75	12.5
Height (cm)	139.7	129.54	78.74	36.2	19.69	31.75
Average Tare Weight						
lb	143	133	65	9.5	6.0	2.5
kg	64.9	60.3	29.48	4.31	2.72	1.3

To learn more call your local Praxair representative,
1-877-PRAXAIR or visit www.praxair.com.



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P-10387
12/2010

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