^{11}B sous forme de trifluorure de bore gazeux

Description

Le trifluorure de bore gazeux est le dopant idéal pour les plaquettes de silicium destinées à la production de micropuces hautement intégrées et à haute densité. Le 11BF3 permet d'accroître l'efficacité et le rendement de la production, et contribue à rendre les puces plus petites et plus performantes.

Customer	:
Gas	: ^{11}Boron Trifluoride, Enriched
Cylinder No.	: 25A050121
P/N	: 20260603-P01-4710
Valve	: CGA642
Fill Pressure at 70°F(21.1°C)	: 1388 PSIG nominal

Lot No.	: S1-260603-$^{11}BF_3$-01
Cylinder Size	: 47 L
Net weight	: 20,900 g
Filling Date	: 2026.06.03
Expiration Date	: 2028.06.02

ISOTOPIC ENRICHMENT

Item	Symbol	Units	Spec.	Control Limit	Det. Limit	Actual Result	Analysis Method
Boron-11	^{11}B	At. %	>99.992	≥99.995	-	99.997	ICP-MS

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Item	Symbol	Units	Spec.	Control Limit	Det. Limit	Actual Result	Analysis Method
Boron-11	^{11}B	Wt. %	>99.992	≥99.995	-	99.997	ICP-MS

CHEMICAL PURITY

Item	Formula	Units	Spec.	Control Limit	Det. Limit	Actual Result	Analysis Method
$^{11}BF_3$	$^{11}BF_3$	mol%	>99.999	>99.9995	-	99.9998	-
Oxygen+Argon	O_2+Ar	ppmv	1		0.004	0.008	GC/DID
Nitrogen	N_2	ppmv	2	-	0.0075	0.065	GC/DID
Carbon Dioxide	CO_2	ppmv	2		0.0028	0.076	GC/DID
Total Air (O_2+Ar+N_2+CO_2)		ppmv	5			0.149	
Methane	CH_4	ppmv	0.5		0.005	0.007	GC/DID
Carbon Monoxide	CO	ppmv	2		0.0081	ND	GC/DID
Sulfur Dioxide	SO_2	ppmv	1.5	-	0.0071	ND	GC/FPD
Silicon Tetrafluoride	SiF_4	ppmv	1		0.02	0.32	FTIR
Hydrogen Fluoride	HF	ppmv	2		0.02	1.66	FTIR

* 1.Quantification of isotopic enrichment and metallic ion contents was performed by ICP?MS with certified reference material calibration and instrumental mass bias correction for isotopic ratios, and calibrated with elemental standard solutions for trace metal analysis.

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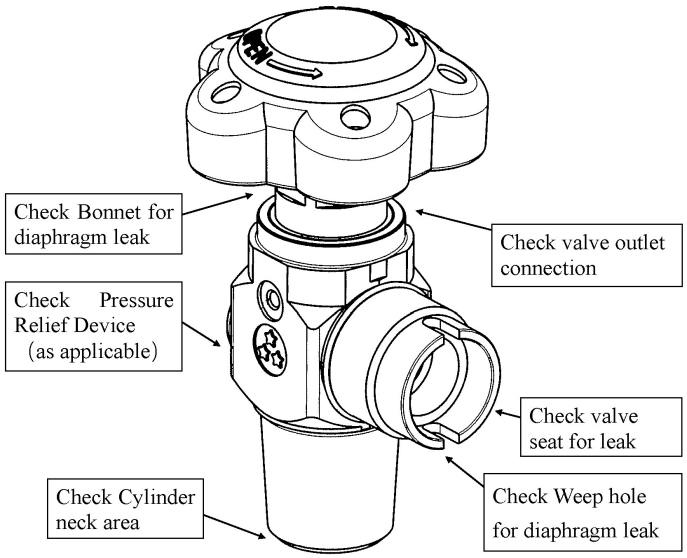

#	Area Checked	Detector	MDL	Result	Pass/Fail
1	Diaphragm (Bonnet)	DOD CLPX BF_3	98.5 ppb	98.5 ppb	PASS
2	Diaphragm (Weep Hole)	DOD CLPX BF_3	98.5 ppb	98.5 ppb	PASS
3	Valve Seat	DOD CLPX BF_3	98.5 ppb	98.5 ppb	PASS
4	Valve Outlet Connection	DOD CLPX BF_3	98.5 ppb	98.5 ppb	PASS
5	Shank At Valve Neck	DOD CLPX BF_3	98.5 ppb	98.5 ppb	PASS
6	Pressure Relief Device	N/A	N/A	N/A	N/A

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