



Semiconductor Pure Gases

Safe Delivery Source (SDS®) for Ion Implantation

228

Arsenic Pentafluoride SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Arsenic Pentafluoride SDS2 (Carbon)	G2658733	JY (2.2 L)	235	33.4
Gas Purity ≥ 99%	G2658734	WY (0.44 L)	45	6.4
<i>Specifications</i>				
Arsenic Trifluoride				≤ 0.03%
Hydrogen Fluoride				≤ 0.2%
Air				≤ 0.3%

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.5" (1/2") VCR.

SDS2 refers to Carbon adsorbent.

Shelf life: 3 years

Arsine SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Arsine SDS2	G1621025	UY (6.6 L)	1320	408.8
Gas Purity ≥ 99.9995%	G1621061	JY (2.2 L)	440	136.3
<i>Specifications</i>	G1621063	WY (0.44 L)	88	27.3

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.5" (1/2") VCR.

SDS2 refers to Carbon adsorbent.

NOTE: Arsine SDS1 (Zeolite) has been discontinued since July 1998.

Shelf life: 2 years

Enriched Boron Trifluoride SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
¹¹BF₃ SDS2 (Enriched)	G1627925	UY (6.6 L)	390	139.4
Gas Purity ≥ 99.9%	G1627961	JY (2.2 L)	130	46.5
¹¹BF₃ ≥ 99.7% (atomic wt.%)	G1627963	WY (0.44 L)	26	9.3
<i>Specifications</i>				

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.25" (1/4") VCR.

SDS2 refers to Carbon adsorbent.

NOTE: BF₃ SDS2 is only available in Carbon adsorbent.

Shelf life: 2 years



Germanium Tetrafluoride SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Germanium Tetrafluoride SDS2	G265858	JY (2.2 L)	620	101.0
Gas Purity ≥ 99.9%	G265859	WY (0.44 L)	120	19.5
<i>Specifications</i>				
Nitrogen				<i>ppmv</i> < 25
Oxygen				< 25
Argon				< 25
Carbon Dioxide				< 25
Sulfur Dioxide				< 25
Hydrogen Fluoride				< 25

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.25" (1/4") VCR.

SDS2 refers to Carbon adsorbent.

NOTE: GeF₄ SDS2 is only available in Carbon adsorbent.

Shelf life: 2 years

Hydrogen Selenide SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Hydrogen Selenide SDS2 (Carbon)	G2659390	JY (2.2 L)	550	164.0
Gas Purity ≥ 99.99%	G2659572	WY (0.44 L)	105	31.3
<i>Specifications</i>				
Hydrogen Sulfide				<i>ppm</i> < 10
Nitrogen				< 5
Oxygen				< 5
THC (as Methane)				< 1
Water				< 100

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 500 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.5" (1/2") VCR.

SDS2 refers to Carbon adsorbent.

Shelf life: 1.5 years (18 months)



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230

Phosphine SDS®1 & SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Phosphine SDS1	G1680925	UY (6.6 L)	260	184.7
Gas Purity ≥ 99.9996%	G1680961	JY (2.2 L)	85	60.4
<i>Specifications</i>	G1680963	WY (0.44 L)	15	10.7
Oxygen <i>ppmv</i>				
< 1.0				
Nitrogen				
< 2.0				
Carbon Dioxide				
< 0.1				
Carbon Monoxide				
< 0.1				
Methane				
< 0.5				
Water				
< 2.0				
Phosphine SDS2	G1681025	UY (6.6 L)	520	369.4
Gas Purity ≥ 99.9996%	G1681061	JY (2.2 L)	170	120.8
<i>Specifications</i>	G1681063	WY (0.44 L)	30	21.3
Oxygen <i>ppmv</i>				
< 1.0				
Nitrogen				
< 2.0				
Carbon Dioxide				
< 0.1				
Carbon Monoxide				
< 0.1				
Methane				
< 0.5				
Water				
< 2.0				

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.5" (1/2") VCR.

NOTE: SDS1 refers to Zeolite adsorbent and SDS2 refers to Carbon adsorbent.

Shelf life: 2 years

Phosphorus Trifluoride SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Phosphorus Trifluoride SDS2 (Carbon)	G2659774	JY (2.2 L)	290	79.1
Gas Purity ≥ 99.9%	G2659775	WY (0.44 L)	55	15.0
<i>Specifications</i>				
Oxygen + Argon (Air) <i>ppm</i>				
≤ 100				
Nitrogen				
≤ 25				
Carbon Dioxide				
≤ 25				

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.25" (1/4") VCR.

SDS2 refers to Carbon adsorbent.

Shelf life: 3 years

Silicon Tetrafluoride SDS®2

Gas Grade Purity Specifications	Product Code	Cylinder Size	Grams Deliverable to 20 Torr	Liters Deliverable to 20 Torr
Silicon Tetrafluoride SDS2	G1696625	UY (6.6 L)	690	160.7
Gas Purity ≥ 99.99%	G1696661	JY (2.2 L)	230	53.6
<i>Specifications</i>	G1696663	WY (0.44 L)	42	9.8
Oxygen <i>ppmv</i>				
< 20				
Nitrogen				
< 80				

A lot analysis for SDS products will be provided on request. Specifications based on Source Gas.

Fill pressure is 650 TORR at 70°F (21°C) and not to exceed 700 TORR at 70°F (21°C). Cylinder connection is 0.25" (1/4") VCR.

SDS2 refers to Carbon adsorbent.

NOTE: SiF₄ SDS2 is only available only in Carbon adsorbent

Shelf life: 2 years