



SEMI-CONDUCTOR LABORATORY
 DEPARTMENT OF SPACE GOVT. OF INDIA
 SECTOR - 72, S.A.S NAGAR - 160071

MATERIAL CODE
 211212035
 DRG NO.

MATERIAL SPECIFICATIONS
 TITLE: DICHLOROSILANE (SiH₂Cl₂)

ISSUE 0	REV. C	Page 1 of 2
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1. Purpose: This spec defines the chemical parameter targets for Dichlorosilane.
2. Specifications:

Technical data:

PROPERTY	SPECIFICATION	UNITS
Purity (Min)	99.50	V%

IMPURITIES

TRACE IMPURITIES	SPEC (Max)	CTR LMT	UNITS
SiH ₃ Cl	0.5	0.5	V%
SiCl ₄	0.02	0.02	V%
SiHCl ₃	0.05	0.05	V%
N ₂	0.01	0.01	V%
B+Al	1.0	1.0	ppbw
P+As	0.35	0.35	ppb
Fe	50	50	ppb
Ni	2	2	ppb
Cr	2	2	ppb

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9/11/15

Note: Certification (C of C) required – Batch analysis.

ORIGINATOR: Mahesh Rm DESIG: Sci/Engr - SE DATE: 27/10/15	APPROVER: Manoj Wadhwa DESIG: GH (VMFG) DATE: 27/10/15	AUTHORISED: [Signature] DESIG: Head, R&QA as IMR DATE: 20/10/15	DCC: [Signature] DESIG: [Signature] DATE: [Signature]	DATE: 11/15
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FORM NO: DCC/09

SECTION 1: TO BE SENT TO THE SUPPLIER



SEMI-CONDUCTOR LABORATORY
 DEPARTMENT OF SPACE, GOVT. OF INDIA
 SECTOR - 72, S.A.S NAGAR - 160071

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DRG NO.

MATERIAL SPECIFICATIONS
 TITLE: DICHLOROSILANE (SiH₂Cl₂)

ISSUE	REV.	Page
0	C	2 of 2

3. Shelf Life : 12 months (from date of filling)
4. Packing Requirement : STAINLESS STEEL
 Cylinder Size (code) : Typical (15 - 45) L.
(Height ≤ 145 cm, Dia. ≤ 23 cm).
 Valve Type : MANUAL TIED DIAPHRAGM
 Gas Content : Typical (15 - 45) Kg.
 CGA Type : DISS 636
 Valve Material of Construction : 316 L SS
5. Safety Requirement : Vendor to specify
6. Storage Conditions : Ambient
7. Test Specifications : Vendor to provide complete analytical data
 vis - a - vis SCL's Specifications.

"End of Section 1" (Section 2 is only for internal circulation)

ORIGINATOR:	APPROVER:	AUTHORISED:	DCC:	DATE:
Mahesh Ram DESIG. : Sc/Engg.-SE DATE: 27/10/15	Manoj Wadhwa DESIG. : GH (VMFG) DATE: 27/10/15	DESIG. : Head, R&QA as MR DATE: 30/10/15	DESIG. : DATE:	11 9/15

FORM NO: DCC/ 09

SECTION 1: TO BE SENT TO THE SUPPLIER



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MATERIAL CODE
211113004

DRG NO.

ISSUE 0	REV. D	Page 1 of 2
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TITLE: 20% Silane (SiH₄) in Helium

MATERIAL SPECIFICATIONS

1. Purpose: This spec defines the chemical parameter targets for 20% SiH₄ in Helium.

2. Specifications:

Technical data:

PROPERTY	SPECIFICATION	UNITS
Purity Silane (Min)	99.995	V%
ASSAY - (SiH ₄)	19.5 - 20.5	V%
Purity Helium (Min)	99.9999	V%
Assay (He)	Balance	V%

IMPURITIES

TRACE IMPURITIES	SPEC (Max)	CTR LMT	UNITS
Silane			
Hydrogen (H ₂)	50	50	ppm/v
Nitrogen (N ₂)	1	1	ppm/v
Oxygen + Argon (O ₂ +Ar)	1	1	ppm/v
Carbon Dioxide (CO ₂)	0.1	0.1	ppm/v
Carbon Monoxide (CO)	0.1	0.1	ppm/v
Moisture (H ₂ O)	0.5	0.5	ppm/v
THC (as Methane and sum of C2-C4)	0.1	0.1	ppm/v
Total Chlorides / Chlorosilanes.	0.5	0.5	ppm/v
Helium			
Oxygen (O ₂)	0.2	0.2	ppm/v
Nitrogen (N ₂)	0.5	0.5	ppm/v
Carbon Dioxide (CO ₂)	0.1	0.1	ppm/v
Carbon Monoxide (CO)	0.1	0.1	ppm/v
Moisture (H ₂ O)	1	1	ppm/v
Methane (CH ₄)	0.1	0.1	ppm/v

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ORIGINATOR: Mahesh Ram DESIG. Sci/Engr. SE DATE: 05/02/16	APPROVER: Manoj Wadhwa DESIG. : GH, VMFG DATE: 05/02/16	AUTHORISED: [Signature] DESIG. : Head, R&Q, A as IMR DATE: 10/2/16.	DCC: [Signature] DESIG. : DATE: (Date)	DATE: 11/2/16
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FORM NO: DCC/09

SECTION 1: TO BE SENT TO THE SUPPLIER



SEMI-CONDUCTOR LABORATORY
 DEPARTMENT OF SPACE, GOVT. OF INDIA
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MATERIAL CODE
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DRG NO.:

ISSUE 0	REV. D	Page 2 of 2
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TITLE: 20% Silane (SiH₄) in Helium

MATERIAL SPECIFICATIONS

Notes:

- 1). Certification (COA) required - Each Cylinder.
- 2). Concentration in ppm by volume.

3. Shelf Life : 18 Months (from date of filling)

4. Packing Requirement :

Cylinder Type:	Carbon steel/ High pressure steel/Carbon steel (QF ultraline)	Cylinder Size:	Typically (20- 50)L (Height ≤ 145 cm, Dia. ≤ 23 cm).
	Valve Type:	Manual Tied Diaphragm	Gas Content:
Valve Material of Construction:	316 L SS		
CGA Type:	DISS 632	Pressure:	Typically 75 kg/cm ² at 35°C (i.e 1066 PSI).

5. Safety Requirement : Vendor to specify

6. Storage Conditions : Ambient

7. Test Specifications : Vendor to provide complete analytical data
 vis - a -vis SCL's Specifications.

"End of Section 1" (Section 2 is only for internal circulation)

DIVISION : *ELI*

No. : *uc*
 Date : *10/2/16*
 Sign : *[Signature]*

ORIGINATOR: Mahesh Ram DESIG. Sci/Engr. -SE DATE: 05/02/16	APPROVER: Manoj Wadhwa DESIG. : GH, VMFG DATE: 05/02/16	AUTHORISED: DESIG. : Head, R&O, as MR DATE: 10/2/16.	DCC: DESIG. : DATE: 11/2/16	DATE: 11/2/16
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FORM NO. SCL/04

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