电子级硅烷气规格书

ELECTRONIC GRADE SILANE SPECIFICATION

在工厂发货之前，对硅烷槽车中的硅烷气产品进行气相分析。

Product, as analyzed in module at plant prior to shipment, vapor phase analysis.

浓度

Concentration

杂质 Impurity	最大值 Maximum	检测方法 Test Method
He	1.0 ppmv	GC - TCD
N_2	0.5 ppmv	GC - DID
O_2/Ar	0.05 ppmv	GC - DID
H_2O	0.2 ppmv	Moisture Analyzer
CH_4	0.04 ppmv	GC - DID
C_2H_6, C_3H_8, C_4H_{10}	0.10 ppmv	GC - DID
CO	0.05 ppmv	GC - DID
CO_2	0.05 ppmv	GC - DID
H_2	20 ppmv	GC - DID
Total Chlorosilanes	0.10 ppmv	IC
Si_2H_6	0.3 ppmv	GC - DID
Si_2H_6O	0.05 ppmv	GC - DID
Total Impurity	1 ppmv	
Total Purity	99.9999 %	

源自硅烷沉积的多晶硅分析

Analysis of polysilicon deposited from silane

O	< 0.2 ppma	FTIR
C	< 0.1 ppma	FTIR
Resistivity	> 10,000 ohm-cm	Irvin Curves
P	< 20 ppta	FTIR/FTPL
B	< 20 ppta	FTIR/FTPL
Al	< 5 ppta	FTIR/FTPL
As	< 5 ppta	FTIR/FTPL
Sb	< 5 ppta	FTIR/FTPL
Ga	< 5 ppta	NAA/BD-ICPMS
In	< 5 ppta	NAA/BD-ICPMS
Fe	< 0.4 ppba	NAA/BD-ICPMS
Cr	< 0.01 ppba	NAA/BD-ICPMS

Ni	< 0.2 ppba	NAA/BD-ICPMS
Cu	< 0.02 ppba	NAA/BD-ICPMS
Zn	< 0.03 ppba	NAA/BD-ICPMS

证明：上文列出的气体槽车罐装在分析证书中予以报告。

CERTIFICATION: Module values for the gases listed above are reported on the Certificate of Analysis.

多晶硅纯度分析、O、C、P、B、Al、As、Sb 和电阻率计算将从与硅烷生产用于槽车罐装的相同时间内生产的多晶硅生长层数据开始。Ga、In、Fe、Cr、Ni、Cu 和 Zn 的中子活化分析将从抽样的多晶硅生长层数据开始。

Polysilicon purity analysis, O, C, P, B, Al, As, Sb and resistivity calculation, will be from growth layer data of polysilicon produced in same time frame as silane produced for module filling. Neutron Activation Analysis for Ga, In, Fe, Cr, Ni, Cu, and Zn will be from growth layer data of polysilicon on a sampling basis.

列出的所有属性将在分析证书中予以报告。

All attributes listed will be reported on the Certificate of Analysis.

备注：以与分析所用方法鉴别力一致的方式说明上文提供的浓度值。无需或未暗示需要比所提供的重要数据数字的固有精度水平更高的精度水平。

Note: The concentration values provided above are stated in a manner consistent with the discrimination powers of the methods used for the analysis. A level of accuracy greater than that inherent in the number of significant figures presented is neither intended nor implied.