

# DATA SHEET

# Heraeus HSQ 100/300

**Data sheet:**      **HSQ 100 rods (V-Zug)**  
Electrically melted direct drawn quartz rods

## 1. GENERAL PRODUCT DESCRIPTION

HSQ 100 is an electrically melted quartz rods, especially designed for industrial rods application, made out of natural quartz sand, which is purified by the unique Heraeus purification process. The rod is fabricated using the Heraeus single step process (V-Zug), which guarantees high purity, tight tolerances and low visual defects. The V-Zug-process represents the most effective manufacturing process for high volume quartz rod production.

## 2. GEOMETRICAL DATA

### Feasible sizes

Diameter [mm]	Diameter Tolerance [mm]	Length [mm]	Length Tolerance [mm]	Remark
8 - 20	± 0.30	500 -2800	+25/-0	Snapcut (Machine cut upon request)
20 - 30	± 0.50			
30 - 40	± 0.70			
40 - 45	± 0.90			

Feature	Area
bow	Less than 1mm/m rod length

## 3. VISUAL FEATURES

Features	
General remarks	Surface defects < 0.5mm are not counted
Bubbles/airlines	Size limit: 8mm
	Typical cumulated length of all bubbles per meter: ≤10mm
Inclusions	Size limit: 0.5mm
	Typically free from inclusions
Devitrifications	Size limit: 5mm
Scratches	Width limit: < 0.6mm
	Typically not deeper than 0.2mm
Other surface defects	Draw marks possible

The data on this data sheet are valid from November 2015. All data are general product specifications and are not binding definition of values. We reserve the right to make alterations.

# DATA SHEET

# Heraeus HSQ 100/300

**Data sheet: HSQ 300/330 rods (S-Zug)**  
Electrically melted multi-step quartz rods

**1. GENERAL PRODUCT DESCRIPTION**

HSQ 300 and super high purity grade HSQ 330 is an electrically melted quartz rod, especially designed for high- end semiconductor applications, made out of natural quartz sand, which is purified by the Heraeus refinement process. The tube is fabricated using the unique Heraeus multi-step process, which guarantees very low bubble content, wide ranges of geometries and nearly perfect surfaces.

**2. GEOMETRICAL DATA**

diameter	
range	tol± (mm)
≥1,5 - ≤3,0	0,20
>3,0 - ≤22	0,25
>22 - ≤45	0,50
>45 - ≤70	1,00
>70 - ≤90	1,50

Length(L) [mm]	Tolerance L [mm]	Remark
500 -2800	+25/-0	snapcut*

Additional tolerances are available on request.

\*machine cut on request

Feature	Area	Tolerance	Note
Bow	all dimensions	≤2mm / 1m	OD >8mm

**3. VISUAL FEATURES**

Features		comments
surface defects	none	scuffs < 10% surface area
devitrification	none	<1mm
	none	<5mm
	none	≥5mm
scratch	Max. rod length	Depth ≥0.2mm
crack	none	
Bubbles*	sum <20mm/m	OD<35mm
	sum <40mm/m	OD>35mm
inclusion	none	>0.1mm

\* Bubbles < 0.5 mm length are not counted. Width <1mm

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## Heraeus HSQ 100/300

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### 4. MATERIAL GRADES

HSQ 300, HSQ 330, HSQ 330S

### 5. PHYSICAL PROPERTIES

Softening temperature:	ca. 1710°C
Annealing temperature :	ca. 1220°C
Strain temperature:	ca. 1125°C
Viscosity at 1300°C:	ca. 11.95dPas
Maximum working temperature:	continuous operation ca. 1150°C short-term operation ca. 1300°C