

A close-up, grayscale photograph of a SOLAR® Crucible, showing the smooth, rounded corner of a thick-walled container. The lighting creates soft shadows that emphasize the material's texture and the precision of the manufacturing.

SOLAR® Crucibles

Added Value Through Quality, Safety In Use And Innovation

Partners in performance with Fused Silica



Where solar meets ceramics

Quality and efficiency

Fused Silica SOLAR® Crucibles are an integral part of the production process of multicrystalline Solar Grade silicon ingots. With the development program stretching back almost 20 years, and a partnership with the major players in the PV industry, Vesuvius has made full use of the unique properties of their Fused Silica to develop what has become the industry standard SOLAR® Crucible - Gen4 and Gen5.

This innovative approach has helped the PV industry to dramatically improve both efficiency and output.

Technical properties

FUSED SILICA 4500	
Metal impurities (Fe, Cu, Ti, Zr, Cr, Ni)	< 45 ppm
Flexural strength (Mpa)	> 12
Bulk density (g/cm ³)	1.89 to 1.96
Thermal conductivity (W/mK)	
20°C	0.64
500°C	0.81
700°C	0.89
1300°C	1.72
Thermal expansion coefficient (°K)	0.6 x 10 ⁻⁶



Full traceability : Each Vesuvius SOLAR® Crucible has its own individual reference number and is supplied with a unique quality assurance report, including a bar code marking system.

Cutting edge development

More than just crucibles - Vesuvius, the market leader

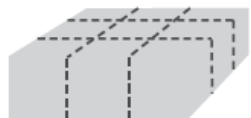
- Vesuvius SOLAR® Crucibles are the industry standard. Making SOLAR® Crucibles since 1989, Vesuvius is the only supplier certified by GT Solar.
- With exceptionally high purity and state of the art production, Vesuvius SOLAR® Crucibles have a record of unparalleled reliability.
- Vesuvius is the world market leader, introducing the new Gen6 SOLAR® Crucible in 2007 and selling hundreds of thousands SOLAR® Crucibles to date.
- All Vesuvius SOLAR® Crucibles are provided with an innovative SESAME® Box packaging and delivery method for easy handling.
- Vesuvius worldwide presence provides the industry with top of line service and production with continuous ongoing technical development.

Generation development

- 1989** The first SOLAR® Crucible ever produced – Manufactured by Vesuvius
- 1993** Vesuvius launched the Gen4 SOLAR® Crucible and it rapidly became the industry standard.
- 2004** Leading the industry in research and development, Vesuvius offers the first Gen5 Jumbo SOLAR® Crucible. This new innovation dramatically increased efficiency and output for the industry.
- 2007 and beyond** Vesuvius prides itself on meeting market demand with the newest technology and the Gen6 SOLAR® Crucible is exactly that. Vesuvius will continue to be the worldwide market leader by providing the customer with the latest technology, first.

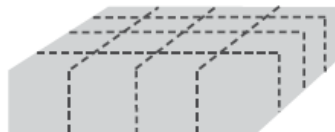
Fused Silica Division SOLAR® Crucible Generations

1989



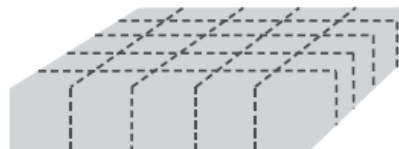
Gen3 = 9 blocks

1993



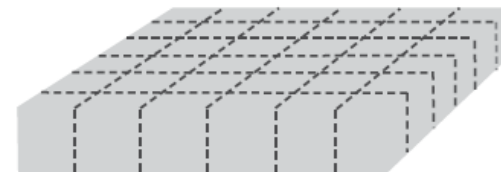
Gen4 = 16 blocks

2004



Gen5 = 25 blocks

2007



Gen6 = 36 blocks

Blocks of 150/156 mm²



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