Corning Industrial Grade Fused Silica is a synthetic amorphous silicon dioxide manufactured by flame deposition. The noncrystalline, transparent, silica glass is an excellent choice for many optical applications in the visible wavelength range as well as tooling applications.

Corning Industrial Grade Fused Silica is available in large bulk forms or can be cut to specific size requirements upon request.

Please call one of our sales offices for more information.

Forms Available
- Round boules: top surface fire polished, bottom surface 60 grit ground flat or as cast, edges as cast.
- Remnant.
- Cut parts; discs and rectangles.
Elastic (Young’s) Modulus 72.7 GPa
Shear Modulus 31.4 GPa
Modulus of Rupture, abraded 52.4 MPa
Bulk Modulus 35.4 GPa
Poisson’s Ratio 0.16
Density 2.201 g/cm³
Knoop Hardness (100 g load) 522 kg/mm²

Softening Point 1585ºC (10¹⁷ poises)
Annealing Point 1042ºC (10¹⁴ poises)
Strain Point 893ºC (10¹⁴.5 poises)
Thermal Conductivity 1.30 W/m K
Thermal Diffusivity 0.0075 cm²/s
Average C.T.E. 0.52 ppm/K 5ºC-35ºC
0.57 ppm/K 0ºC-200ºC
0.48 ppm/K -100ºC-200ºC

Optical Properties:

Birefringence constant 35.0 nm/cm MPa
Abbe Number = 67.8
Glass type no. 458/678 (Mil-G-174)

Refractive Index and Dispersion

Data in 22º C in 760mm Hg dry nitrogen gas

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Inclusions

Typical Inclusion Size <1.27 mm
Maximum Average Inclusion Size* <0.6 / 100cm³
Maximum Inclusion Size** 2.5 mm

* There may be some gaseous inclusion clusters.
** There may be a few gaseous inclusions exceeding this limit.

Impurities

Typical OH Content 800 – 1000 ppm

NOTE: Unless otherwise stated, all values represent typical data @ 25 ºC
We are here to help you specify the best product for your application. For further information, please contact:

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The information contained herein is based upon data considered to be accurate. However, no warranty is expressed or implied regarding the performance of this product. The only applicable warranties are those that are set out in a contract or purchase.

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www.corning.com  
October 2008