SilPower®

Standard and High Density

INTRODUCTION

SilPower® Rigid Silica is a high performance infra-red reflector obtained from Quartzel® fibers having an SiO_2 content ≥ 99.95%. This raw material grants its unique **reflectivity**, **EM transparency** and **thermal insulation** properties to SilPower®. It is easily **machinable** allowing the design of complex shapes. Unlike other materials SilPower® has a **diffuse reflection**, not specular. Its reflection is superior to gold in short IR and moreover, suitable in vacuum furnaces. Using SilPower® will allow furnace makers to offer to their customer improved energy efficiencies.

APPLICATIONS

Short infra-red and UV reflection: *brings significant energy savings and an homogeneous heat*

- Paper ink drying,
- PET stretch bottle forming machines,
- Photovoltaic wafer metallic paste firing furnaces
- Process furnace operating in the range of 0.5 to 2.5 µm

Electromagnetic transparency: *brings high yields and an homogeneous heat*

- Industrial Microwave ovens insulation,
- Induction furnaces

Miscellaneous

- High Power cinema lamps,
- Concentrated Solar Power reflection

GRADES

Standard Density SD (0.65 nominal) / High Density HD (0.9 nominal)
Maximum size: 400 x 400 x 100 mm

TECHNICAL DATA (*typical values*)

Mechanical

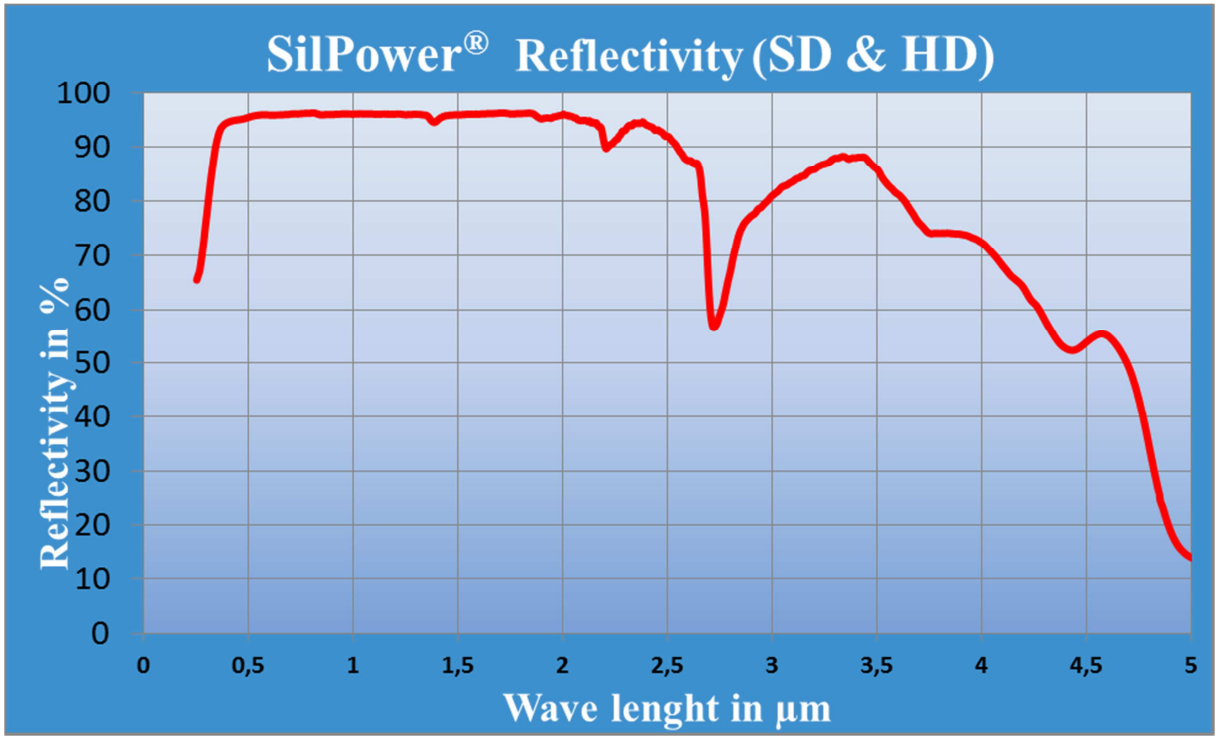
Grade	Modulus of Rupture in MPa	Compressive Strength in MPa
SD	1.2	1.3
HD	2.0	3.8

Conductivity

Conductivity in W.m-1.K-1	SD Grade	HD Grade
at 25℃ (298℁)	0,18	0,18
at 450℃ (723℁)	0,26	0,24
at 703℃ (976℁)	0,34	0,32
at 948℃ (1221℁)	0,39	0,39
at 1205℃ (1478℁)		0,46

Measurement standards : EN 993-14 (Standard Grade), NF EN ISO 8894-1 (High grade)

Reflectivity



STORAGE

SilPower® does not lose its properties over time. During storage and handling, contact with alkalis must be avoided.

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