



Material Specification Opaque Fused Quartz **ilmasil® PO-0**

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ilmasil® PO-0 is an electrically fused, opaque quartz, manufactured by fusing quartz sand using QSIL's proprietary plasma melting process. The opacity is achieved by controlled distribution of fine microbubbles. There are no chemical additives used to achieve opacity.

Application: This specification is applicable to all products produced with **ilmasil® PO-0**

1 Optical Properties

1.1 Transmission

< 4% for thickness 3 mm within the wavelength range of 190...8000 nm.

2 Chemical Properties

Purity: > 99,9 % SiO₂

Limit: Sum of foreign elements: max. 250 ppm

2.2 OH-content

Typical: < 100 ppm *

Tolerance: max. 300 ppm *

* OH-content: values are applicable for non-flameworked material only

2.3 Chemical resistances

Hydrolytic resistance per DIN 12111 (1st. class)

Acid resistance per DIN 12116 (1st.class)

Alkaline resistance per DIN 52322 (1st.class)

3 Thermal Properties

Softening Point ($\lg \eta$ (in dPas) = 7.6)	ca. 1715 °C
Processing Range $\lg \eta$ (in dPa s) = 5 – 8	1700 – 2100°C
Max. usable temperature	
Long term	1100 °C
Short term	1300 °C

4 Mechanical Properties

(at 20°C)

Density	2.05...2,15 g/cm ³
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