

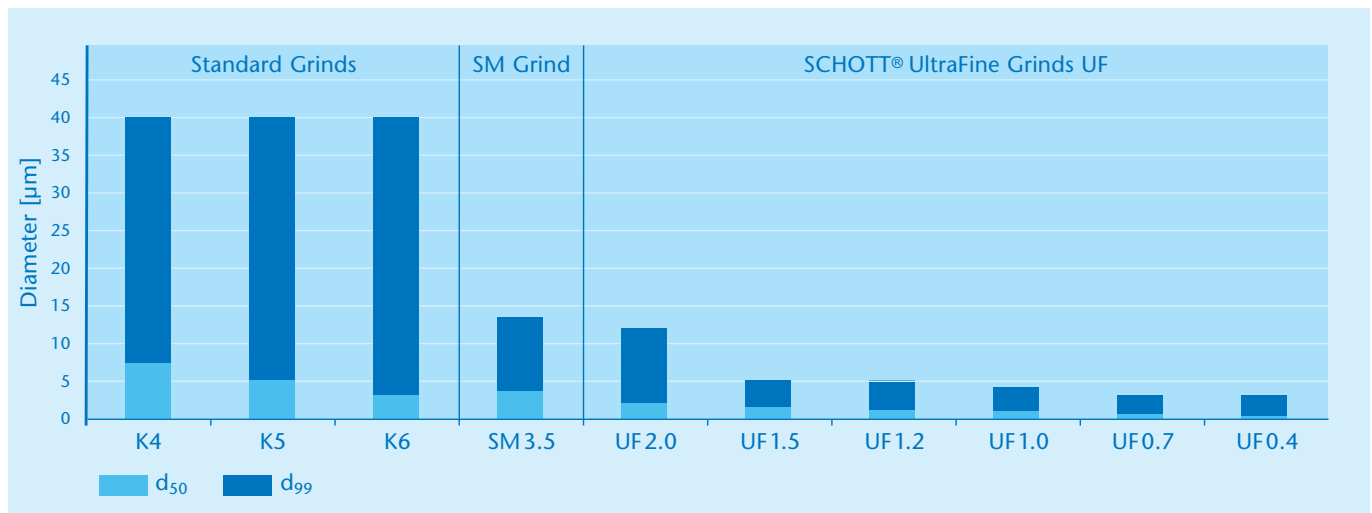
SCHOTT® DentalGlass | Inert

Grain Sizes

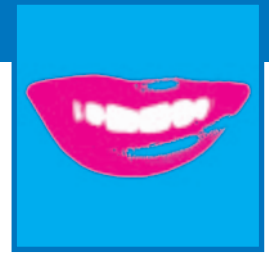
To allow you to create the perfect filler mix for your material we offer our glasses in a variety of grain sizes. All our inert dental glasses can be supplied to you in grain sizes down to 0.4 μm (d_{50}).

| Type | Description | Size | Grain size | | Approx. Surface [m ² /g] |
|------|---|-------|----------------------------|----------------------------|-------------------------------------|
| | | | d_{50} [μm] | d_{99} [μm] | |
| K | Standard grind | K1 | 30 ± 10 | ≤ 150 | - |
| | | K2 | 16 ± 4 | ≤ 100 | - |
| | | K3 | 10 ± 2 | ≤ 63 | - |
| | | K4 | 7 ± 1 | ≤ 40 | - |
| | | K5 | 5 ± 1 | ≤ 40 | 0.5 |
| | | K6 | 3 ± 1 | ≤ 40 | 0.6 |
| SM | Special grind with narrow distribution | SM3.5 | 3.5 ± 1 | ≤ 13 | 2 |
| UF | Special grind with narrow distribution and extremely low abrasion level | UF2.0 | 2.0 ± 0.25 | ≤ 12 | 3 |
| | | UF1.5 | 1.5 ± 0.25 | ≤ 5 | 5 |
| | | UF1.2 | 1.2 ± 0.2 | ≤ 5 | 7 |
| | | UF1.0 | 1.0 ± 0.2 | ≤ 4 | 8 |
| | | UF0.7 | 0.7 ± 0.2 | ≤ 3 | 13 |
| | | UF0.4 | 0.4 ± 0.1 | ≤ 3 | 23 |

Grain size description d_{50} (d_{99}): Equivalent diameter, for which the distribution sum has the value of 50% (99%).



Graphical display of d_{50} and d_{99}



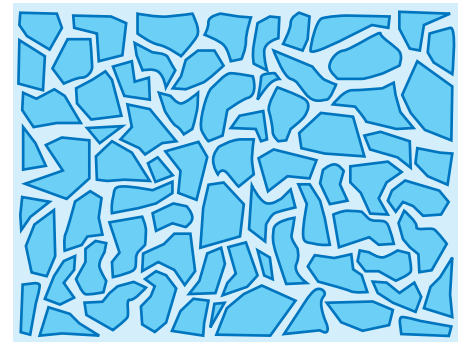
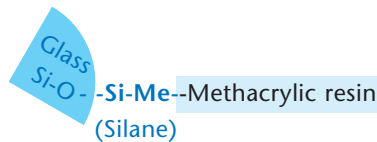
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Grain Sizes

Silanation – Our additional service for you:

As an additional service for you we offer to supply our inert dental glasses silanated. A silane layer will allow the bonding of the non-reactive dental glass to the resin components of your material.

Silane: Organic compound that chemically reacts with hydrophilic glass surface and makes it hydrophobic. The other end of the silane can chemically react with the hydrophobic resin.



■ Glass — Silane ■ Resin

Grain sizes for Silanated Inert Dental Glasses

| Type | Description | Size | Grain size | | Silane addition [weight-%] |
|--------|--|-------------------|----------------------|----------------------|----------------------------|
| | | | d ₅₀ [µm] | d ₉₉ [µm] | |
| K sil | Standard grind | K5 0.5% Silane | 5 ± 1 | ≤ 40 | 0.5 |
| | | K6 0.6% Silane | 3 ± 1 | ≤ 40 | 0.6 |
| SM sil | Special grind with narrow distribution, silanated | SM3.5 1.0% Silane | 3.5 ± 1 | ≤ 13 | 1.0 |
| UF sil | Special grind with narrow distribution and extremely low abrasion level, silanated | UF2.0 1.0% Silane | 2.0 ± 0.25 | ≤ 12 | 1.0 |
| | | UF2.0 1.4% Silane | 2.0 ± 0.25 | ≤ 12 | 1.4 |
| | | UF1.5 1.6% Silane | 1.5 ± 0.25 | ≤ 5 | 1.6 |
| | | UF1.5 2.3% Silane | 1.5 ± 0.25 | ≤ 5 | 2.3 |
| | | UF1.2 2.6% Silane | 1.2 ± 0.2 | ≤ 5 | 2.6 |
| | | UF1.2 3.0% Silane | 1.2 ± 0.2 | ≤ 5 | 3.0 |
| | | UF1.0 3.2% Silane | 1.0 ± 0.2 | ≤ 4 | 3.2 |
| | | UF1.0 4.6% Silane | 1.0 ± 0.2 | ≤ 4 | 4.6 |
| | | UF0.7 4.2% Silane | 0.7 ± 0.2 | ≤ 3 | 4.2 |
| | | UF0.7 6.0% Silane | 0.7 ± 0.2 | ≤ 3 | 6.0 |
| | | UF0.4 9.4% Silane | 0.4 ± 0.1 | ≤ 3 | 9.4 |

The coupling agent used is γ -Methacryloxypropyl-tri-methoxy-Silane. Stated percentage of silane addition: x wt % of unhydrolised silane + $(100-x)$ wt % of powder = 100 wt % of batch.

For more information:

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glass made of ideas

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