Assembly with SNAP IT®

- Intelligent solutions for every application
- Easy to assemble

Mechanical

Glue

Combinations

Food Safety

SUPRAX® 8488 conforms to the quality standards of the German LFGB, regulation (EC) No. 1935/2004 as well as FDA CPG 7117.06 and FDA CPG 7117.07.

RoHS compliant

Made of SUPRAX® Borosilicate Glass

Combining the advantage of SUPRAX® 8488 borosilicate glass featuring the excellent thermal and chemical resistance: Outstanding state-of-the-art glass pressing and tooling expertise make optically precise, customized products a reality for you.

Material Characteristics

Stable mechanical and optical properties:
- Operating temperatures -80°C up to 400°C
- Very low thermal expansion coefficient
- Fire resistant (not flammable)
- Excellent surface hardness
- Low dispersion reduces color artifacts
- Resistant against hydrocarbons
- No-aging
- No outgassing
- No yellowing
- Recyclable

Applications

- Stage and Studio Lighting
- Projection Technologies
- Automotive Front Lighting
- Professional Lighting for In- and Outdoor
- White Goods Illumination
- Industrial applications like safety sight glasses and metering technologies

SUPRAX® 8488 GLASS
THE PERFECT MATERIAL

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www.auer-lighting.com
## Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>SUPRAX® 8488</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density (g/cm³)</td>
<td>2.31</td>
<td>Ø 25°C</td>
</tr>
<tr>
<td>Water absorption (weight %)</td>
<td>No</td>
<td>acc. to ISO 62</td>
</tr>
<tr>
<td>Thermal expansion coefficient (10⁻⁶/K)</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Young’s modulus E (10⁴ N/mm²)</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>Poisson’s ratio μ</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Thermal conductivity λ (W/(m K))</td>
<td>1.20</td>
<td>Ø 90°C</td>
</tr>
<tr>
<td>Heat capacity (J/g K)</td>
<td>0.80</td>
<td>Ø 25°C</td>
</tr>
<tr>
<td>Flammability</td>
<td>No</td>
<td>UL 94</td>
</tr>
<tr>
<td>Permanent operating temperature (°C)</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Thermal shock resistance ΔT (K)</td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>Transformation temperature Tg (°C)</td>
<td>545</td>
<td></td>
</tr>
<tr>
<td>Light transmission (%)</td>
<td>92</td>
<td>D = 5 mm</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.482</td>
<td>n, Ø 25°C</td>
</tr>
<tr>
<td>Thermo-optic coefficient dν/dT (10⁻⁴/K)</td>
<td>−0</td>
<td></td>
</tr>
</tbody>
</table>
| Abbe number | 65 | |}

## Electrical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume resistance (Ω · cm)</td>
<td>7.1 @ 50 Hz, 5.8 @ 1 MHz, 93 @ 2.466 GHz</td>
</tr>
<tr>
<td>Dielectric constant ε</td>
<td>5.4</td>
</tr>
<tr>
<td>Loss tangent tan δ</td>
<td>0.050 ± 0.005 @ 20°C, 0.045 ± 0.004 @ 400°C</td>
</tr>
<tr>
<td>TEM half-value layer (mm)</td>
<td>610 ± 50 @ 25°C, 125 ± 10 @ 400°C</td>
</tr>
</tbody>
</table>

## Chemical Properties

### Composition:
SiO₂ (76 %), B₂O₃ (12 %), Na₂O (6 %), Al₂O₃ (4 %), BaO (1 %), ZrO₂ (1 %)

### Test Results:
- **Hydrolytic resistance**: DIN ISO 720 (Class II), DIN ISO 1776 (Class A2)
- **Acid resistance**: Test acc. to DIN ISO 695, Class A2
- **Alkaline resistance**: Test acc. to DIN ISO 9603
- **Max. abrasion**: 0.1 max. abrasion, 0.058 max. abrasion, 0.1 max. abrasion MAXOS⁻¹
- **Max. abrasion**: Na₂O/dm²: > 100, Na₂O/dm²: > 600, mg/dm²: > 100, mg/dm²: > 175

## Transmittance (D = 5 mm)

### Refractive Index and Abbe Number

#### Wavelength (nm):
- 280, 320, 400, 360, 440, 560, 520, 640, 600, 720, 680, 800, 760

#### Transmission (nm):
- LaSF₄6, LaSF₃1, LaF₂1, LaK₈, SK16, FK51, BaK₄, BK7, PMMA, Polycarbonate, Polystyrene, Suprax, Rare Earth Glass, Crown Glass, Flint Glass, SF₆, LLF1, KzFS₄, KzFS₅SF₂, Fs2, Laₑ₆₈, Laₑ₆₉, Laₑ₇₀, Laₑ₇₁, Laₑ₇₂, Laₑ₇₃, Laₑ₇₄, Laₑ₇₅

## UV Stability

### Wavelength (nm):
- 250, 350, 450, 550, 650, 750, 850, 950

### Transmission (%):
- 0 h, 1 h, 3 h, 17 h, 30 years ASTM E313