# MATERIAL SAFETY DATA SHEET

**NEXTERION® Slide E**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Author:</td>
<td>SCHOTT Technical Glass Solutions GmbH, Germany</td>
</tr>
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<td>Document:</td>
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</tbody>
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1 General Information

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Product Name: NEXTERION® Slide E
Chemical Name: Epoxysilane Coated Borosilicate Glass
C.A.S. Number: None
2 Composition / information on ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Percent</th>
<th>Reg.* (Y/N)</th>
<th>Cas#</th>
<th>OSHA (PEL)</th>
<th>ACGIH (TLV)</th>
<th>Carc. (Y/N)</th>
</tr>
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<tbody>
<tr>
<td>Silica</td>
<td>75 – 85</td>
<td>Y</td>
<td>014808607</td>
<td>0.1mg/m³</td>
<td>0.1mg/m³</td>
<td>N</td>
</tr>
<tr>
<td>Boron Oxide</td>
<td>10 – 20</td>
<td>Y</td>
<td>001303862</td>
<td>15mg/m³</td>
<td>10mg/m³</td>
<td>N</td>
</tr>
<tr>
<td>Alumina</td>
<td>1 – 5</td>
<td>Y</td>
<td>001344281</td>
<td>15mg/m³</td>
<td>10mg/m³</td>
<td>N</td>
</tr>
<tr>
<td>Sodium Oxide</td>
<td>1 – 5</td>
<td>Y</td>
<td>1313593</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
</tr>
<tr>
<td>Potassium Oxide</td>
<td>0 – 2</td>
<td>N</td>
<td>12136457</td>
<td>N/A</td>
<td>N/A</td>
<td>N</td>
</tr>
</tbody>
</table>

*Regulated as per lists: OSHA 29CFR 1910 Subpart Z: ACGIH; NTP and IARC

One glass slide contains approximately 4 to 5 x10^{14} epoxy groups per cm² surface area.

3 Physical data

- Boiling Point: not applicable
- Vapor Pressure: not applicable
- Vapor Density: not applicable
- Solubility in Water: not applicable
- Specific gravity: 2.2 – 2.3 g/cm³
- Melting Range: 510 – 550°C
- Physical State: solid with a density between 2.2 to 2.3 g/cm³
- Appearance and odor: in plates with various thickness, no odor

4 Fire and explosion hazard data

- Flash Point: not applicable
- Auto Ignition Temperature: not applicable
- Flammable Limits % Vol. in Air: not applicable
- Extinguishing Media: non-combustible material
- Special Fire Fighting Procedures: Use extinguishing media that is appropriate for the classification of surrounding fire. Inorganic glass is non-combustible.
- Unusual Fire and Explosion Hazards: There is the possibility of flying glass fragments if hot glass comes in contact with water or carbon dioxide extinguishing media.
5 Health hazard data

Inhalation: Acute: Respiratory irritation. Chronic: Possible pneumoconiosis effects

Ingestion: Ingestion's may cause vomiting, diarrhea, depressed circulation and in severe cases shock, coma, paralysis and cyanosis.

Skin: Ground glass particles and dust may cause irritation.

Eye: May cause irritation.

First Aid: Inhalation: Remove to fresh air. Seek medical attention.

Ingestion: Seek medical attention.

Skin: Wash with soap and water. Seek medical attention if irritation permits.

Eye: Flush well with running water. Seek medical attention if irritation permits.

6 Spill, leak and disposal

Spill or Leak Procedures: No special precautions.

7  Special protection information

Engineering Controls:  Use local exhaust ventilation, hood or equipment enclosure to avoid dispersal of fibrous or other glass particulars into the workplace air.

Personal Protective Equipment:  Respiratory - if glass dust or particulars are above the OSHA permissible exposure limits use a NIOSH approved respirator for dust and fibers. Eye protection – industrial safety glasses that meet ANSI Z87 standards. Protective gloves – recommended gloves for protection from sharp edges.

8  Special precautions and comments

Reactivity:  Borosilicate glass is a stable material. As a particular chemically resistant glass it is inert to many chemicals (including acidic and basic solutions), but it may react to hot, strong alkaline solutions and – like all glasses - with concentrated very aggressive hydrofluoric and phosphoric acids. Hazardous decomposition or byproducts may emit metal oxide fumes when heated to high temperatures.

Comments:  Inorganic borosilicate glass is an amorphous, inorganic, usually transparent or translucent substance, consisting of a mixture of silicates, alkaline components, and/or borates formed by fusion of silica and various types of oxides with a flux and a stabilizer into a mass that cools to a rigid condition without crystallization.
9 Other information

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Abbreviations used:
ACGIH: American Conference of Governmental Industrial Hygienists
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
CFR: Code of Federal Regulations
DSL: Canadian Domestic Substance List
EPA: Environmental Protection Agency
HEPA: high Efficiency Particulate Air
HMIS: Hazardous Material Identification System
IARC: International Agency for Research on Cancer
NDSL: Non Canadian Domestic Substance List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
RCRA: Resource Conservation and Recovery Act
RQ: Reportable Quantities
SARA: Superfund Amendments and Reauthorization Act
TLV: Threshold Limit Value
TPQ: Threshold Planning Quantity
TSCA: Toxic Substance Control Act
WHMIS: workplace Hazardous Materials Information System