Ultra-Pure Ceramics for Semiconductor Processing

CoorsTek offers a broad spectrum of materials for key semiconductor applications. To ensure optimal product performance, CoorsTek engineers offer assistance through every phase of the design and manufacturing processes, including component design assistance, material selection, and production expertise.

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>Quarz</td>
</tr>
<tr>
<td>Si</td>
<td>Silicon</td>
</tr>
<tr>
<td>SiC</td>
<td>Silicon Carbide</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>Alumina</td>
</tr>
<tr>
<td>B₄C</td>
<td>Boron Carbide</td>
</tr>
<tr>
<td>Al</td>
<td>ESD-Safe Ceramics</td>
</tr>
<tr>
<td>C</td>
<td>Graphite</td>
</tr>
<tr>
<td>N</td>
<td>Nitrides</td>
</tr>
<tr>
<td>Y₂O₃</td>
<td>Yttria Bulk</td>
</tr>
<tr>
<td>ZrO₂</td>
<td>Zirconia</td>
</tr>
</tbody>
</table>

**Al₂O₃ - Alumina**
- AD-995 Alumina
- ADS II Alumina
- Fine-grained Alumina
- PlasmaPure-UC™ Alumina
- RF Pure Alumina

**SiO₂ - Quartz**
- T230
- T240

**Si - Silicon**

**SiC - Silicon Carbide**
- PureSi® CVD SiC
- UltraSi™ Sintered SiC
- CeraSiC-B Sintered SiC
- SC-SD Sintered SiC
- Ultraclean ™ Si:SiC
- TPSS Si:SiC
- CVD SiC Coating

**B₄C - Boron Carbide**

**Al - ESD-Safe Ceramics**
- Statsafe™ ESD ADC-92

**C - Graphite**
- SiC Coated Graphite
  - Fine Grain
  - Clear Carbon

**N - Nitrides**
- Aluminum Nitride (AlN)
- Silicon Nitride (Si₃N₄)

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Semiconductor Manufacturing Components

With excellent material properties, CoorsTek ultra-pure ceramics are ideal for use throughout the entire semiconductor manufacturing cycle.

**Etch**
- Domes
- Focus Rings
- Nozzles
- Plates
- Shields
- Shower Heads

**Deposition**
- Chamber Liners
- Cover Rings
- Gas Distribution Plates
- CVD, EVD, ECP
- Domes
- Heaters
- Plating Insulators

**Wafer Inspection & Lithography**
- Ceramic Filters
- Photomask Substrates
- Stage Components
- Vacuum Break Filters
- Wafer Tables

**Implant**
- Air-Bearings
- Air Bearing Guideways
- Interferometer Reference Mirrors
- Scale Mounts

**Planarization — CMP**
- Cmp Tables
- Polishing Plates

**Single Silicon Pulling**
- Crucibles

**Thermal Batch Diffusion & LPCVD**
- Back Fill Injectors
- Baffles & Holders
- Cantilever Paddles
- Liners & Process Tubes
- Pedestals
- Wafer Boats

**High Temperature RTP & EPI**
- Diffusers
- Insulators
- Rf Shields
- Rings
- Susceptors

**General Applications**
- End Effectors
- Heaters
- Insulators
- Lift Pins
- Multi-Layer Channeled Ceramic Substrates

**Back End / Packaging**
- Capillaries
- Die Collets
- Vacuum Pick-Up Tools
- Wedges
About CoorsTek
For over 100 years, industry leaders have relied on CoorsTek for solutions to the world’s most perplexing engineering and manufacturing challenges. Since the inception of the semiconductor and electronics industries, CoorsTek has served the world’s most respected OEMs by producing exceptionally durable, reliable, and high-purity ceramic components.

With the 2014 acquisition of Covalent Materials Corporation, CoorsTek became the world’s largest manufacturer of engineered ceramics. CoorsTek now offers an extensive portfolio of over 300 materials, including silicon carbides, aluminas, zirconias, graphite, quartz, and custom blends adapted for specialized applications.

CoorsTek employs the world’s leading ceramics engineers and is supported by the industry’s largest and most sophisticated research and development infrastructure, with centers in North America, Europe, and Asia.

With over six thousand employees and nearly 500,000 square meters of manufacturing space, CoorsTek has unparalleled manufacturing capacity. We offer a variety of forming processes including injection molding, dry pressing, isostatic forming, and extrusion to ensure high-quality, low-cost manufacturing.

As best-practice manufacturers, we take quality very seriously. All CoorsTek facilities comply with internationally recognized manufacturing and quality standards, such as ISO-9001.

With over 500,000 square meters of manufacturing space across four continents, CoorsTek is the international partner of choice for high-performance semiconductor components. For more information, contact a CoorsTek materials expert today at +1 800 821 6110.