



**Q Gen-Next Sustainable Technology Pvt. Ltd.**

**High Performance Ceramic Coatings**

**Contact us:**

Corporate Office: 21, Shah Industrial Estate, Deonar Mumbai – 400088

Tel: +91-8369744305 E-mail: [info@ganzkuhl.com](mailto:info@ganzkuhl.com)

# Relevant Product Range:

- ❑ Manufacture total range of ceramic parts for a wide variety of applications. A glimpse into the relevant products for your industry.
  
- ❑ **High Wear, Corrosion & Abrasion Resistant Products:**
  - ❑ **Cerolymer®** : Wear and Corrosion Resistant Ceramic Composite Coatings
    - ❑ Suitable for application on various equipment for protection against erosion and corrosion.
  - ❑ **Engineered Wear Resistant Ceramic Linings** for conveying Abrasive Lumps / Grains / Powder / Slurry
  - ❑ **Zirprotekt™**: High Performance High Temperature Resistant Ceramic Coating for protecting refractories and increasing their lifespan. **Suitable upto 1800°C.**
  - ❑ **Zirprotekt™ Metal**: High Performance High Temperature Resistant Ceramic Coating for protecting Furnace Metal Shells and other Metallic Surfaces that shall withstand high temperature. **Suitable upto 1500°C.**

# Relevant Product Range:

- ❑ **Product Range (Continued)..**
  - ❑ **Heat Retention Balls**, for applications upto **1250°C**.
  
  - ❑ **Innovative Ceramic Insulation for use from 250°C to 1700°C**
    - ❑ 100% Free from Fibers, which are a source of health risk
    - ❑ Ultra-light and highly insulating, hence requiring lesser thickness
    - ❑ Some formulations can be engineered to meet location geometry.
    - ❑ Some formulations can be delivered in form of ready-to-cast powders, which can be cast by the user at the site itself.

# The Core Technical Team

## **Technical Director - Mr. Dev Bhise:**

- ❑ B.E.(Chem.), M.S. (USA)
- ❑ Led the company's foray into manufacturing precision parts, at micron level tolerances, in high volumes.
- ❑ Developed the capabilities to handle turnkey projects and manufacture of critical multi-material assemblies.
- ❑ Product Design and Materials Science Expert

Backed by a strong team of R&D, Design Engineers & QC staff.

# High Temperature Products: Ceramic Coatings

## Zirprotekt™ Coating

- ❑ Zirprotekt™ is a Zirconia-based high-performance coating, suitable for applications involving temperatures upto **1800°C**.
- ❑ Applications:
  - ❑ Preventive maintenance/repairs of kilns and furnaces
  - ❑ Linings of furnaces and troughs in molten metal handling
  - ❑ Protective coating of high temperature chimneys, valves, gates for protecting them against corrosive gases at high temperatures.
  - ❑ Can be sprayed on to Ceramic Fiber Installations, to protect them for damages due to flame impingement or corrosive gases.

# High Temperature Products: Ceramic Coatings and Glues

## ❑ Zirprotekt™ Coating

### ❑ Physical Characteristics

Colour	Light Brown
Density	~3.25 gm/cc
Cold crushing strength	~340 kg/cm <sup>2</sup>
Thermal expansion RT-1800°C	< 1.0%
Shrinkage at 1800°C	< 0.25%
Thermal Shock Capability	Excellent
Max. Working Temperature	1800°C

ZrO <sub>2</sub>	~65% (min)
SiO <sub>2</sub>	~31%
Al <sub>2</sub> O <sub>3</sub>	~1.00%

### Important Note: **Chemical Characteristics**

Please note that the above results are from test samples and should be used only for guidance. This chart is intended to illustrate typical properties of advanced ceramic materials available from M/s Q Gen-next Sustainable Technology Pvt. Ltd. The buyer should recognize that exact properties may vary according to product configuration and may sometimes be tailored to meet specific requirements. The information set forth herein is offered for comparison only, and is not to be construed as absolute engineering data or constituting a warranty or representation for which M/s Q Gen-next Sustainable Technology Pvt. Ltd. assume legal responsibility.

# High Temperature Products: Ceramic Coatings

## Zirprotekt™-Metal Coating

- ❑ **Zirprotekt™-Metal** is a Zirconia-based high-performance coating, suitable for applications on metal surfaces, for temperatures upto **1500°C**.
- ❑ It can be used for a variety of metals, except Aluminium.
- ❑ Applications:
  - ❑ Protective coating of metal chimneys, ducts, valves, gates
  - ❑ Base Plates for Kilns for protecting them against corrosive gases at high temperatures.
  - ❑ The base substrate can be of Mild Steel / Stainless Steel. The application can be by spraying or trowelling.
  - ❑ The main purpose is to protect them for damages due to hot corrosive gases, particularly Flue Gases.
  - ❑ The insulating characteristics of **Zirprotekt™-Metal** also lower the heat conducted to the base substrate.

# High Temperature Products: Ceramic Coatings

## ❑ Zirrotekt™-Metal Coating

### ❑ Physical Characteristics

Colour	Light Brown
Density	~ 2.90 gm/cc
Cold crushing strength	~ 297 kg/cm <sup>2</sup>
Shrinkage at 1200°C	< 0.16%
Thermal Shock Capability	Excellent
Max. Working Temperature	1500°C

ZrO <sub>2</sub>	~63% (min)
SiO <sub>2</sub>	~28%
Al <sub>2</sub> O <sub>3</sub>	~1.00%

### ● Important Note: **Chemical Characteristics**

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# High Temperature Products: *Innovative Ceramic Insulation*

- ❑ Innovative Ceramic Insulation for use from 250°C to 1700°C
  - ❑ The key is the Materials Science involved, in handling the diverse range.
  - ❑ Various grades, for various temperature ranges
  - ❑ High Insulation, giving lesser losses
  - ❑ Can be totally customized to meet your sizing requirements.
  - ❑ Ability to handle projects on turnkey basis, involving design-build or design-install
  - ❑ Powerful technical team, to handle the most diverse applications.

***THANKS FOR YOUR VALUABLE TIME !***