

■ **Product Portfolio**

HIGH QUALITY MATERIALS
OUT OF THE PULSATION REACTOR



IBU-tec

IBU-tec is a leading specialist for rotary kilns, pulsation reactors and thermal process engineering in general. Extensive know-how with materials for a wide variety of end uses comes from over 50 years of experience with polishing agents made from rare earths to colorless UV-absorbing materials and tailor-made catalysts. Our patented pulsation reactors

offer an effective platform for the production of homogeneous, finely suspended powders (oxides) with modifiable properties. Our technology enables us to produce primary particles in nanometer size, which are agglomerated in the sales product in μm range and therefore outside labeling requirements.

Product Portfolio

ALUMINIUM(III)-OXIDE



| Specific surface area (BET) m^2/g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|--------------------------------------|------------|
| 150 \pm 5 | 20 - 40 | 0.3 - 0.5 | > 99 |

Potential applications: polishing agents, catalyst supports, ceramics

CERIUM(IV)-OXIDE



| Specific surface area (BET) m^2/g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|--------------------------------------|------------|
| 40 \pm 2 | 15 - 20 | 10 - 20 | > 99 |

Potential applications: polishing agents, catalysts, UV-absorbers

IRON(III)-OXIDE



| Specific surface area (BET) m^2/g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|--------------------------------------|------------|
| 40 \pm 2 | 35 - 40 | 5 - 10 | > 99 |

Potential applications: corrosion protection, catalysts, lubricants, battery material

YTTRIUM-ALUMINIUM-OXIDE



| Specific surface area (BET) m^2/g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|--------------------------------------|------------|
| 12 \pm 2 | 100 - 1000 | 1 - 2 | > 99 |

Potential applications: light sources, LEDs, lasers

ZINC(II)-OXIDE

ZnO

| Specific surface area (BET) m ² /g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|---------------------------|------------|
| 60 ± 5 | 12 - 15 | 0.2 - 0.3 | > 99 |
| 35 ± 2 | 20 - 25 | 0.3 - 0.4 | > 99 |
| 20 ± 2 | 20 - 50 | 0.4 - 0.5 | > 99 |

Potential applications: UV-absorbers, pigments, cosmetics, lacquers

ZIRCONIUM(IV)-OXIDE

ZrO₂

| Specific surface area (BET) m ² /g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|---------------------------|------------|
| 70 ± 5 | 15 - 20 | 0.3 - 0.5 | > 99 |
| 30 ± 5 | 30 - 70 | 1 - 5 | > 99 |

Potential applications: grinding and polishing agents, 3D printing

YTTRIUM-STABILIZED ZIRCONIUM(IV)-OXIDE

Y-ZrO₂

| Specific surface area (BET) m ² /g | Primary particle size (TEM) nm | Agglomerate size (d50) μm | Purity (%) |
|---|--------------------------------|---------------------------|------------|
| 70 ± 5 | 15 - 20 | 0.3 - 0.5 | > 99 |
| 30 ± 5 | 40 - 50 | 1 - 5 | > 99 |

Potential applications: ceramics, bioceramic implants

CUSTOMIZED PRODUCTS

Standard specifications and materials are given in the tables above.

- If desired, we can optimize these to be customer-specific and adapt the parameters to your requirements.
- Further oxides and dopings can be produced upon request.
- Suspensions with different specifications can also be created.

Please contact us for more information!
Email: mail@jibu-tec.com | Phone: +49 - 3643 - 8649 - 0

Imprint

IBU | tec

IBU-tec advanced materials AG

Hainweg 9-11

99425 Weimar

Germany

Phone: +49 (0) 3643 8649-0

Fax: +49 (0) 3643 8649-30

Mail: mail@ibu-tec.com

Internet: www.ibu-tec.com