Perlkat 46-10 Spheres
Silica-alumina gel as catalyst substrate

BASF offers a unique spherical silica-alumina gel designed to provide catalyst manufacturers with a substrate tailored to meet their specific needs.

Perlkat® 46-10, a bead shaped, amorphous silica gel with high alumina content, has been commercially successfully applied as a catalyst support for many years.

The choice of the support is crucial for heterogeneous catalysis. Perlkat 46-10 allows a fine dispersion of the active catalytic species on the surface of the support.

Support materials for heterogeneous catalysis are characterized by their pore structure. Perlkat 46-10 has a pore size distribution which allows the free transport of the reaction species and products to and from the active sites. Perlkat 46-10 high specific surface area and pore volume underlines its superior suitability as a catalyst support.

Perlkat 46-10 silica-alumina gel has a high content of alumina which ensures beneficial effects in catalytic applications.

The bead shape of Perlkat 46-10 results in excellent mechanical stability, which proves to be an important advantage for catalytic applications.

The spherical shape also provides good void space and flow distribution through the catalyst bed.

The availability of various different bead sizes allows optimization of the pressure drop.

### Product Benefits
- Superior pore structure
- High aluminum content
- Spherical form
- Different bead sizes

### Packaging
- 1000 L bags
- 200 L steel drums

### Chemical Composition
| SiO₂, wt % | > 90 |
| Aluminum as Al₂O₃, wt % | ~ 5 |
| Sodium, wt % | < 0.1 |
| Sulfate, wt % | < 0.1 |

### Physical Properties
| Packed Bulk Density, g/cm³ | ~ 0.7 |
| Crushing Strength, N/bead | > 100 |
| Attrition Rate, wt % | < 0.1 |
| Water Resistance | Yes |

### Pore Structure Characteristics
| Surface Area, m²/g | 360 |
| Pore Volume, cm³/g | 0.44 |

### Bead Sizes
1 – 4 mm or 1 – 3 mm
Others available upon request
About Us

BASF's Catalysts division is the world’s leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF Catalysts develop unique, proprietary catalyst and adsorbent solutions that drive customer success.

BASF - We create chemistry

Pore Size Distribution on the Basis of Nitrogen Adsorption

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