Shapes and geometries

CeramTec can produce catalyst carriers in many different shapes and sizes:

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-
-
- customer specific shapes
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Special requirements

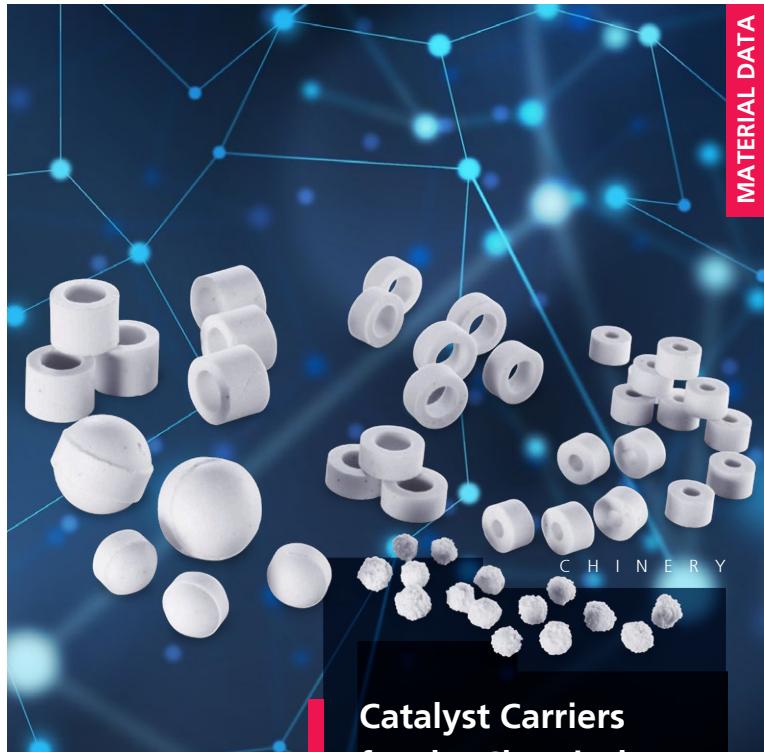CeramTec addresses special customer requirements. For example:

- Chemical quality
- Mechanical strength
- Surface
- Special material and processing requirements

After determining the requirements, custom specifications can be agreed.
CeramTec develops custom solutions in close collaboration with customers to devise the best individual solution for the respective application.

Materials for ceramic catalyst carriers

A wide variety of materials offered by CeramTec can be used for catalyst carriers.

- **Dense catalyst carriers (for shell type catalysts)**
  - » Alumina
  - » Steatite (Magnesium silicate)
- **Porous catalyst carriers (for impregnated catalysts)**
  The porosity can be adjusted to the respective customer needs for the required surface, e.g. it can range from simple porosity to a special bi-modal and tri-modal pore distribution.
  - » Alumina (Alpha, Al2O3)
  - » Steatite (Magnesium silicate)

Advantages

-
- Mechanical strength and stability
-
-

MATERIAL DATA

C H I N E R Y

Catalyst Carriers for the Chemical Industry

The measured values mentioned before were determined for test samples and are applicable as standard values. The values were determined on the basis of DIN-/DIN-VDE standards and if these were not available, on the basis of CeramTec standards. The values indicated must not be transferred to arbitrary formats, components or parts featuring different surface qualities. They do not constitute a guarantee for certain properties. We expressly reserve the right to make technical changes.

Ceramic Carrier Materials in Heterogeneous Catalysis

Ceramic catalyst carriers are an important component of heterogeneous catalysis. They are primarily used in highly selective oxidation processes. In heterogeneous catalysis, bulk material catalysts are used in the chemicals industry to convert gaseous or liquid reactants.

The actual catalyst, the catalytic substance, may be used as a mold alone or with a carrier. Carriers are necessary in situations where high demands are placed on the mechanical strength of the catalyst, the active catalytic substance must be present in a thin layer or there is a need to conserve valuable catalyst substances.

Application areas in the chemical industry:

- Phthalic anhydride
- Naphthalene
- Maleic acid from benzene
- Acrylic acid from propylene
- Ethylene oxide
- Other applications

CeramTec works together with the customer to develop the specifically required mold and then offers catalyst carriers in lab quantities up to large-scale production.