

# CATALYST CUSTOM MANUFACTURING CAPABILITIES FROM EVONIK

Accelerating Your Chemistry®

Hydrothermal  
Synthesis

Precipitation

Impregnation

Forming

Calcination &  
Reduction

## COMPREHENSIVE PRODUCTION CAPABILITIES FOR FIXED BED CATALYST CUSTOM MANUFACTURING

Hydrothermal synthesis and/or precipitation are steps in the manufacturing of a number of high performance catalyst systems.

### Hydrothermal synthesis:

- Typically required for zeolite synthesis
- Hydrothermal treatment up to approx 190°C and approx 20 bar
- Followed by washing, drying, calcination, forming

### Precipitation-type catalysts:

- Precipitation of mixed metal oxides, e.g. for selective oxidation
- Drying and calcination of powders
- Forming of powder or coating thereof onto preformed support

### Impregnation/coating:

- Impregnation of solutions onto preformed supports (typically 2-5 mm)
- Coating of powder onto preformed supports
- Subsequent steps including drying, calcination, reduction

With wide-ranging operating permits, we can handle many different materials. The production unit encompasses control of incoming materials for specification compliance, solid and liquid blending stations, specifically designed extrusion lines, continuous drying and rotary kiln calcination for temperatures up to 950°C. For any catalyst or support leaving our plants, tailored quality control services, which are agreed upon with our customers, are provided. All of our productions are ISO 9001 and 14001 certified.

### How you benefit from custom catalyst projects:

- Allows you to concentrate on your core business
- Provides you with a skilled partner for developing and scaling up of catalysts
- Access to sophisticated catalyst manufacturing equipment
- Offers greater flexibility in the use of catalyst types and quantities
- De-bottlenecks your own catalyst production



Evonik Industries has been a leader in chemical catalysts for more than 75 years. Now as before, customers all over the world rely on Evonik as a competent and trusted partner. Today Evonik is a fully integrated partner in catalysis, featuring homogeneous and heterogeneous catalysis. This makes Evonik unique, and gives our customers the flexibility of finding the most cost efficient solution for their needs. Working with Evonik means having direct access to our regional technical and commercial organization. With a passion for the catalyst business our experienced teams strive for quick response times and high quality tailored solutions to your catalyst topic.

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**EVONIK RESOURCE EFFICIENCY GMBH**

Business Line Catalysts  
Rodenbacher Chaussee 4  
63457 Hanau  
Germany

PHONE +49 6181 59-13399

FAX +49 6181 59-2699

[catalysts@evonik.com](mailto:catalysts@evonik.com)  
[www.evonik.com/catalysts](http://www.evonik.com/catalysts)  
[www.evonik.com](http://www.evonik.com)