



We create chemistry

X3D[®] Technology

From 3D printing to industrial reality

NOW

in Commercial
Production!

BASF's X3D[®] technology X3D[®] is no longer pilot technology. With the successful start-up of the world's first industrial-scale X3D[®] production plant in Ludwigshafen, BASF has transitioned additive manufacturing of catalysts into reliable, commercial-scale manufacturing. X3D[®] enables the production of catalysts with engineered 3D geometries that are impossible to achieve with conventional forming technologies. These optimized shapes translate directly into measurable performance gains at industrial scale.

Key Benefits:

- **Higher Efficiency:** Enhanced surface area improves reaction efficiency and product quality.
- **Lower Energy Consumption:** Open-structured catalysts minimize pressure drop, leading to energy savings during operation.
- **Seamless Integration:** Easy drop-in solution that requires minimal adjustments to existing processes.



Proven Technology with Real Customer Impact

BASF has successfully deployed X3D[®] catalysts in commercial applications, delivering measurable benefits:

An Hui Jintung

“The plant started up smoothly, and plant performance has significantly improved compared to before. Production achieved a record high, generating substantial economic benefits for our company. We will continue our collaboration with BASF to promote catalyst upgrades and replacements across additional units.”

Eter Zhu, General Manager

BASF Personal Care and Nutrition

“Already at the first plant we observed significant efficiency gains when applying the X3D[®] catalyst, such as lower pressure drop at the converter and reduced consumption of energy and caustic soda. Encouraged by this performance, we have already rolled out the new catalyst across several plants.”

Built for scale – ready for growth

To meet growing customer demand, BASF has invested in industrial X3D[®] production capacity in Ludwigshafen. The production concept is designed for scalability, reproducibility, and long-term supply reliability, ensuring that X3D[®] is a commercial solution—not a niche technology.

Why Choose X3D[®]?

X3D[®] combines the freedom of additive manufacturing with the reliability, quality standards, and global footprint of BASF. Customers adopting X3D[®] benefit from:

- Proven performance in industrial operation
- Commercial availability and secure supply
- Tailor-made catalyst solutions backed by BASF application expertise

X3D[®] is additive manufacturing—made industrial



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