

High performance **loves** low pressure drop

BASF OxiStar® Fixed Bed Oxychlorination Catalysts and Diluents offer very low pressure drop fixed bed catalyst solutions for the PVC industry resulting in very high performance in your plants. At BASF, we create chemistry.



Fixed Bed Oxychlorination Catalysts and Diluents

 **BASF**
The Chemical Company

Just as catalysts make the right reactions happen, so do we. BASF combines the strength of BASF – The Chemical Company, with the experience of our chemists and engineers and expertise in process technology. Our dedication to catalyst chemistry results in products and services that meet and exceed customer expectations and requirements. We are committed to work diligently with you to understand your needs and translate them into the right product for your process. If you are looking for a catalyst manufacturer who knows how to make the right reactions happen, trust BASF.

At BASF, we utilize our vast experience, in-depth industry knowledge, and latest technologies to produce catalysts of superior performance. When you choose BASF, not only will you be choosing the finest catalysts, you will also receive our industry-recognized customer support that combines our dedication to service with extensive experience in catalysis.

Our Portfolio

Oxychlorination Fixed Bed Catalysts

For 1-3 Reactor Units	OxiStar® O3-115 (5 x 5 x 2.5 mm Ring), O3-115K65, O3-115K80, O3-115/100
For 1-2 Reactor Units	OxiStar® O3-114 (7 x 7 x 3 mm Ring), O3-114K65, O3-114K80, O3-114/100
For Post Chlorination Reactors	OxiStar® O3-18 (4-6 mm Sphere)

Oxychlorination Fixed Bed Diluents

Standard Pressure Drop	D9-20 (3-6 mm) Graphite Split, D9-20 (5-8 mm) Graphite Split
Medium Pressure Drop	D9-21 (Graphite Tablet, 5 x 5 mm)
Lowest Pressure Drop	D10-22 (Al ₂ O ₃ Ring, 6 x 6 x 2.5 mm)



BASF OxiStar® O3-115

Best Choice for Fixed Bed Processes

With OxiStar® O3-115 we offer you the best Oxychlorination Catalysts for the production of ethylene dichloride (EDC) using fixed bed technology. BASF OxiStar® O3-115 is the leading performer in all fixed bed processes with the lowest pressure drop in the market. OxiStar® O3-115 is used in the following processes:

Air Based: increase of HCl loading to 135% above design load of the reactor possible

Air Based O2 Enriched: increase of HCl loading to 175% above design load of the reactor possible

O2 Based: OxiStar® O3-115 catalyst productivity (13.95 kt EDC / m³ cat x year) vs. competitor catalyst (10.00 kt EDC / m³ cat x year) and 0.25 % higher EDC purity.

OxiStar® O3-115 Performance Advantages

Combined with the bimodal pore size distribution of BASF Oxychlorination Catalysts, the increase of the inner ring diameter leads to:

- lower bulk density
- shorter residence times in the particle
- higher particle surface per reactor volume

The Effect:

- lower pressure drop - up to 35% higher throughput
- higher HCl conversion - higher productivity
- less total oxidation - higher selectivity
- lower particle temperature - lower hot spot temperature
- less dilution material - homogeneous temperature profile



OxiStar® 03-115

The Right Choice for Your Success

Best Oxychlorination Catalyst

With OxiStar® 03-115, BASF offers catalysts with a superior yield and the lowest production costs for EDC in the market.

Highest Asset Utilization Rates

The low pressure drop oxychlorination catalyst and diluent systems enables BASF to guarantee maximum plant capacity.

Lowest Pressure Drop

OxiStar® 03-115 provides the highest performance and the lowest pressure drop.

Superior Service

BASF provides outstanding customer service through data analysis support and operational recommendations.

Most Effective Synergies

All BASF Oxidation Catalysts are designed to work in perfect synergy with each other.



Global References

Company	Location	Process
Chemplast Corporation	Tamil Nadu / India	EVC (air)
Dagu Chemical Factory	Tianjin / China	EVC (O2, recycle)
Dina	Krk / Croatia	Dow (O2, recycle)
Dow Chemical	Confidential	Confidential
	Confidential	Confidential
Hanwha	Ulsan, Korea	EVC (O2, recycle)
	Ulsan, Korea	EVC (O2, recycle)
	Yeosu, Korea	EVC (O2, recycle)
	Yeosu, Korea	EVC (O2, recycle)
	Yeosu, Korea	EVC (O2, recycle)
Ineos	Stenungsund / Sweden	EVC (air, O2 enriched)
Spolana	Neratovice / Czech Republic	EVC (air)
SolVin	Antwerp / Belgium	EVC (O2, recycle)
	Antwerp / Belgium	EVC (air, O2 enriched)
TOSOH	Yokkaichi / Japan	TOSOH (air)
	Yokkaichi / Japan	TOSOH (air)
	Yokkaichi / Japan	TOSOH (air)
TVCM	Kaoshiung / Taiwan	EVC (air)
Westlake	Geismar, LA / USA	EVC (O2, recycle)
	Geismar, LA / USA	EVC (O2, recycle)

“We are using BASF catalysts at Spolana for more than 30 years. We had been using several types. In 2007 we successfully changed to the newest generation catalyst OxiStar® O3-115. It’s a high activity catalyst with a low pressure drop that allows us to run economically the oxychlorination plant under a broad range of operating conditions.”

Antonín Kučera, Spolana, VCM plant Technologist



Americas

BASF Corporation
25 Middlesex/Essex Turnpike
Iselin, New Jersey, 08830, USA
Tel: +1-732-205-5000
Fax: +1-732-205-7725
Email: catalysts-america@basf.com

Asia Pacific

BASF East Asia Regional HQ Ltd.
45th Floor, Jardine House
No. 1 Connaught Place
Central, Hong Kong
Tel: +852-2731-0191
Fax: +852-2731-5634
Email: catalysts-asia@basf.com

Europe, Middle East, Africa

BASF SE
67056 Ludwigshafen, Germany
Tel: +49-621-60-21153
Fax: +49-621-60-43023
Email: catalysts-europe@basf.com

www.catalysts.basf.com/chemicals

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. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary catalyst and adsorbent solutions that drive customer success.

Service

At BASF, we know that our success is dependent upon your success. That is why we are dedicated to offering intelligent system solutions, supported by our outstanding customer and technical assistance. A complimentary analysis of your current processes will reveal the BASF products and services that will greatly improve your efficiency and bottom line.

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