

## METHANOL SYNTHESIS



Clariant MegaMax 800 offers a high performance copper-zinc catalyst for methanol synthesis to help you make the most of your methanol business. Our strength in methanol synthesis technology grows from our roots in Süd-Chemie, a leading company in the development of process catalysts for chemicals markets. The broad portfolio of catalyst products is now part of the Catalysts business unit of Clariant.

MegaMax 800 is highly selective, extremely durable, and highly active even at very low reactor temperatures and pressures. Because of its energy efficiency and superior performance, it is setting new technological standards in the field of methanol synthesis. MegaMax 800 can boost your competitiveness and considerably increase your profitability.

**MegaMax 800 enhances your business by providing the following benefits:**

- Is flexible for all types of plants and all kinds of technologies
- Significantly increases efficiency and enables a higher production rate
- Strengthens sustainability practices by improving the use of resources and reducing carbon footprint
- Enhances low-temperature activity
- Shows the lowest deactivation known on the market, offering longer operation with extended catalyst lifetime
- Has outstanding mechanical stability
- Enables reduced by-product make, decreasing refining cost and product loss
- Is suitable for CO<sub>2</sub>- and CO-rich conditions
- Is flexible for use with all feedstocks
- Has been tested for green methanol (based on CO<sub>2</sub>)

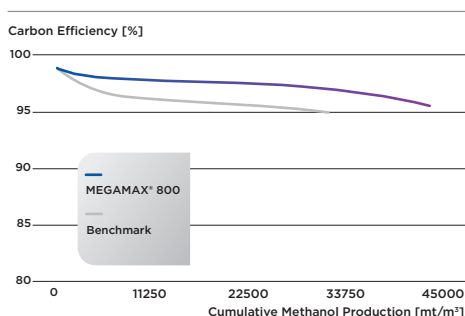
# MegaMax<sup>®</sup> Series METHANOL SYNTHESIS

## Sustainable Competitive Advantages

### Higher production stability of

#### MegaMax 800

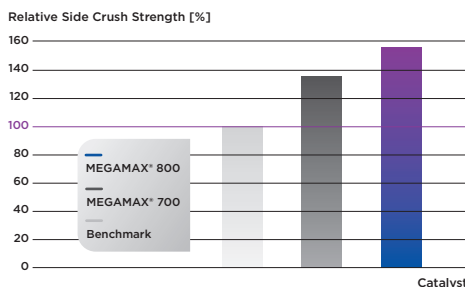
The enhanced catalytic activity and stability of MegaMax 800 allows you to run your methanol plant more efficiently, leading to a significant gain in the cumulative methanol production. This gain is much higher than the market benchmark, as demonstrated in Fig. 1.



### Superior mechanical stability of

#### MegaMax 800

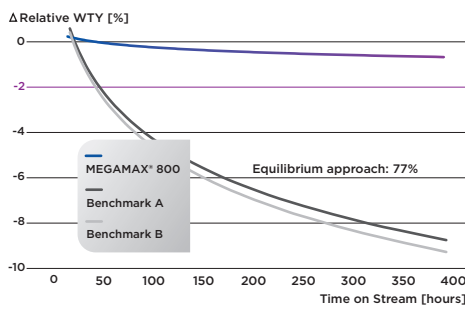
Clariant's reputation as a producer of highly stable catalysts is built on the comparative testing of the mechanical stability of MegaMax 800 against benchmark catalysts. Mechanical stability is crucial for the operating unit in order to resist compressive forces and crushing by thermal cycling (Fig. 2).



### Outstanding stable activity of

#### MegaMax 800 with time-on-stream

Sintering rates are highly reduced with this new formulation. MegaMax 800 maintains its outstanding high activity for a much longer time compared to benchmark catalysts in demanding, CO rich (coal gasification gas) conditions, as shown in Fig. 3.



— **FIGURE 1** Highly stable productivity of methanol through MegaMax 800

— **FIGURE 2** Superior mechanical stability of MegaMax 800 compared to Benchmark and MegaMax 700

— **FIGURE 3** Outstanding stable activity of MegaMax 800 compared to Benchmarks

Clariant offers innovative solutions based on the requirements and expectations of our customers. It is our ambition to design and develop responsive catalytic solutions that turn opportunities into sustainable reality.

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Clariant International Ltd

CLARIANT INTERNATIONAL LTD  
Rothausstrasse 61  
4132 Muttenz  
Switzerland

CATALYSTS  
syngas@clariant.com

WWW.CATALYSTS.CLARIANT.COM