

# actiCAT® Presulfurization Technology

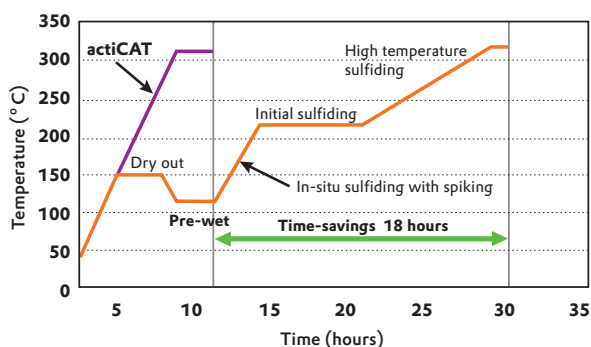
## Proven Performance You Can Count On

### Description

**actiCAT®** presulfurization is a proven, time-saving alternative to in-situ catalyst activation with a significant cost advantage over fully-sulfided products. Using **actiCAT** presulfurization will help ensure an easier startup with optimal catalyst activity.

- No more dealing with toxic sulfur additives
- We can work with your catalyst vendor to consolidate our service and your catalyst purchase into a single purchase order
- **actiCAT** presulfurized catalyst can be loaded in air, if proper precautions are followed
- Easy startup guidelines
- Sulfur is already loaded into the catalyst
- No H<sub>2</sub>S monitoring required

### Startup timelines for in-situ sulfiding and actiCAT presulfurized catalyst



### Advantages

- **Speed**  
No dry-out steps  
No temperature holds
- **Convenience**  
Optimal sulfiding of the active metals
- **Proven Reliability**  
Simple heat-up, trouble-free

### Performance

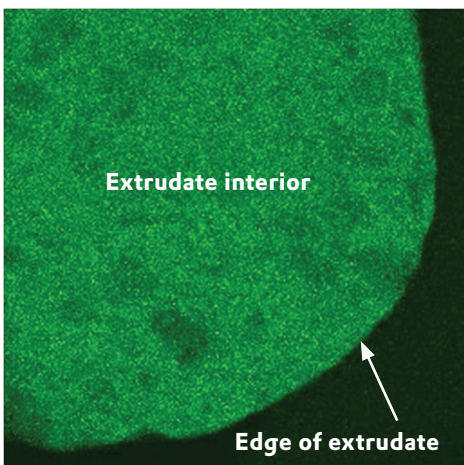
A greater than stoichiometric amount of sulfur is added to the catalyst to ensure that all base metal sites will be sulfided. Sulfur is uniformly distributed throughout the entire catalyst pore structure and chemically bound in place.

Sulfiding is completed during reactor heat-up. The risk of metals reduction is effectively eliminated as the presence of sulfur in the pores drives the reaction towards the desired metal sulfides.

The commercial performance of **actiCAT** catalyst is equivalent to or better than that of in-situ or fully sulfided catalyst.

### Customized Formulations

- **actiCAT® HT** – conventional hydrotreating applications
- **actiCAT® HC** – specially formulated for hydrocracking catalysts
- **actiCAT® TG** – tail gas applications
- **actiCAT® PG** – pygas applications



### TRILOBE CROSS SECTION

- Extrudate is completely filled with Sulfur (light green)
- Sulfur is distributed homogeneously throughout extrudate - completely filling catalyst pores

## Proven Reliability

- **actiCAT** technology has been used for over 25 years.
- Over 300 million pounds sold globally.
- Improved startup economics in every type of hydrotreating unit.
- Routinely loaded in air by numerous refiners and multiple loading contractors.
- Porocel will work with you and your contractor to provide detailed air-loading procedures and guidelines.

OPTIMAL VALUE

FAST

PROVEN

RELIABLE

COST EFFECTIVE

#### Disclaimer

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#### EVONIK OPERATIONS GMBH Business Line Catalysts

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