Totsucat® Sulfiding and Passivation

Totsucat®, with optional Passivation allow for safe loading under air with reasonable loading and handling precautions. Passivation can be added to any of the listed Totsucat® (including Totsucat® CFP) LOAD & GO™ service allows for easier and safer handling during catalyst loading.

**Totsucat® G**
- For: Naphtha HT, Gasoline Post Treat, Tail Gas Units, Lube Units
- Operational Conditions:
  - Totsucat® G has no sulfur requirement for the feed. Start-up can be in liquid phase or gas phase. Gas recirculation is not required since the catalyst is totally preactivated. Unit temperature restrictions are not an issue.
- Handling and Loading Conditions:
  - Preactivated catalysts are packaged in drums or flowbins. Standard form is non-passivated and must be loaded under inert conditions. Optional passivation allows for handling under air.

**Totsucat® E**
- For: Cat Feed HT, Diesel HT (Use Totsucat® D for ULSD Catalysts)
- Operational Conditions:
  - Totsucat® E requires sufficient sulfur in the feed (at least 0.5 wt%) to complete activation. Start-up can be liquid phase or gas phase. Gas recirculation and sufficient unit temperature (600-620°F) to finalize activation of the catalyst is required.
- Handling and Loading Conditions:
  - Preactivated catalysts are packaged in drums or flowbins. Without passivation, the catalyst must be loaded under inert conditions. Optional passivation allows for handling and loading under air.

**Totsucat® CFP**
- For: Any HT Unit, Starting with Cracked Feeds
- Operational Conditions:
  - Totsucat® CFP has no sulfur requirement for the feed. Start-up can be in liquid phase or gas phase. Gas recirculation is not required since the catalyst is completely activated. Unit temperature restrictions are not an issue.
- Handling and Loading Conditions:
  - Preactivated catalysts are packaged in drums or flowbins. Without passivation, the catalyst must be loaded under inert conditions. Optional passivation allows for handling and loading under air.
When to use Totsucat® D Presulfiding and Preactivation:
Totsucat® D is optimized for sulfiding the latest generation of high activity catalysts typically used in ULSD applications. Typical Applications: ULSD hydrotreaters.

Operational Conditions:
Totsucat D has no sulfur requirement for the feed. Start-up can be in liquid phase or gas phase. Gas recirculation is not required since the catalyst is completely activated. Unit temperature restrictions are not an issue.

Handling and Loading Conditions:
Preactivated catalysts are packaged in drums or flowbins. Without passivation, the catalyst must be loaded under inert conditions. Optional passivation allows for safe handling and loading under air.

When to use Totsucat® HC Presulfiding and Preactivation:
Totsucat® HC uses special conditions to carefully sulfide Hydrocracking catalysts. Preactivated catalyst are especially useful for gas phase startups. Typical Applications: Hydrocracking Catalysts

Operational Conditions:
Totsucat HC has no sulfur requirement for the feed. Start-up can be in liquid phase or gas phase. Gas recirculation is not required since the catalyst is preactivated. Unit temperature restrictions are not an issue.

Handling and Loading Conditions:
Preactivated catalysts are packaged in drums or flowbins. Without passivation, the catalyst must be loaded under inert conditions. Optional passivation allows for safe handling and loading under air.

When to use Totsucat® N Presulfiding and Preactivation:
Totsucat® N is designed for sulfiding Hydrocracker Pretreat (HCPT) catalysts. Preactivated catalyst are especially useful for gas phase startups. Typical Applications: Hydrocracker Pre-treat catalysts.

Operational Conditions:
Totsucat N has no sulfur requirement for the feed. Start-up can be in liquid phase or gas phase. Gas recirculation is not required since the catalyst is preactivated. Unit temperature restrictions are not an issue.

Handling and Loading Conditions:
Preactivated catalysts are packaged in drums or flowbins. Without passivation, the catalyst must be loaded under inert conditions. Optional passivation allows for safe handling and loading under air.

Precautions for Handling and Loading Passivated Totsucat® Catalysts
No air circulation through the loaded catalyst bed—No chimney effect
Constant supervision of reactor loading
Open catalyst containers stored in covered and ventilated area
Continuous monitoring of temperature and SO₂ inside the reactor during loading
Pressure test with nitrogen or hydrogen
Stand-by refinery nitrogen availability
Breathing air (SCBA) while inside reactor

Eurecat offers on-site loading and start-up assistance

All information concerning the Totsucat® product line is offered in good faith and is believed to be reliable. However, this information shall not be construed as a formal commitment or warranty from Eurecat. Technical Documents for each process and application should be consulted prior to sulfiding process selection, catalysts loading, and start-up.

Totsucat® is a registered trademark and proprietary processes of Eurecat S.A.