

# Prosorb N

## Sulfur Guard Bed Adsorbent

**BASF Prosorb N, used as sulfur guard beds for naphtha reformers and isomerization units, is a next generation Nickel based adsorbent which provides significant performance improvement for removal of trace levels of various sulfur species**

BASF Prosorb N is produced as special high surface area star-shaped extrudates with a nominal diameter of 1/16" (1.6 mm). It is delivered pre-reduced and passivated.

Prosorb N boasts higher sulfur capacity including up to 50% higher removal for thiols and up to 100% higher removal efficiencies for thiophene as compared to competitive Ni based guard beds. Typical operating temperatures range from 140-170°C.

### Value drivers

1. Protects downstream equipment and maximizes mileage as well as yield of downstream catalysts
2. Non-selective removal of sulfurs with very high capacity
3. Longer bed life compared to competitive materials, requiring fewer costly changeouts which require downtime
4. Higher capacity and better performance compared to Cu based adsorbent, without running the risk of Cu leaching

### Product Applications

1. Removal of various broad range of sulfur species (H<sub>2</sub>S, COS, mercaptans, sulfides, disulfides and thiophenes) from feed streams typically used in naphtha reformers and isomerization units.
2. Sacrificial sulfur adsorbent for streams containing difficult to remove / broadest range of organosulfurs

### Typical Properties

Ni, wt %	~ 56%
Surface Area, m <sup>2</sup> /g	~ 185
Packed Average Bulk Density, kg/m <sup>3</sup> (lbs/ft <sup>3</sup> )	~ 800 (~ 50)
Bulk Crush Strength	~ 0.9 MPa (~131 psi)

### Pre-Treatment

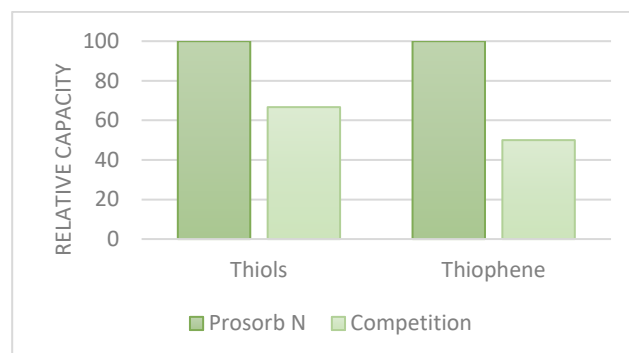
Prior to start-up, the bed must be activated by removing the passivation. This can be performed via hydrogen activation, nitrogen activation, or by using the feed to be treated (hot oil activation). Maximum performance is achieved via hydrogen activation at temperatures of 150 – 180°C.

### Packaging

- Steel drum, 125 kg (275 lbs) net

### Shipping Point

- De Meern, The Netherlands



Relative Capacity of Prosorb N vs Competition

## 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, including advanced battery materials. 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 solutions that drive customer success.

**BASF - We create chemistry**

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