Catalyst Data Sheet

BASF Catalyst R 5-12 is designed for high efficiency removal of H₂S gases such as hydrogen, natural gas and ethylene. It can be applied either as a standalone guard bed, as a guard bed to protect other catalysts such as Pd deoxo types, or as a following bed to remove H₂S formed in hydrodesulfurization reactors.

Sulfur absorption capacity is strongly a function of temperature. The chart below gives the capacity-vs.-temperature relationship for relatively dry streams. If however the feed contains higher amounts of water, the performance and capacity are negatively affected.

![Graph showing Lbs S per 100 lbs R5-12 vs. Temperature (deg.C)]

**Composition:** approx. 95% highly activated zinc oxide

**Form:** 4 mm extrudates

**Bulk Density:** 1050 kg/m³ (65.5 lb/ft³) may vary with loading technique

**Crush Strength:** > 2 kg (knife edge method)

**Operating Temp.:** preferably 200-400 °C

**Thermal Stability:** 500 °C

**Lifetime/capacity:** Capacity and lifetime depend on sulfur levels, space velocity, temperature and other factors. Contact BASF for assistance on your particular application.

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