

### **Product Data Sheet**

# Cu-0226 S

## Copper Oxide Impregnated Spheres

BASF Cu-226 S is a highly dispersed copper oxide impregnated on a high surface alumina used primarily for removing traces of O<sub>2</sub> in inert gases like nitrogen.

BASF Cu-0226 S is available in spheres with a nominal diameter of 8x14 mesh (1.2 - 2.4 mm) or 14x28 mesh (0.6 - 1.2 mm).

Cu-0226 S has originally been developed by Dow and has also been referred to as Q5.

#### **Product Applications**

- Removal by chemisorption of O<sub>2</sub> from inert gases at ambient temperatures e.g., when used in glove boxes.
- 2. Catalytic removal of O<sub>2</sub> from gases at temperatures beyond 100°C / 210°F.
- 3. Removal of H<sub>2</sub>S, COS and halides from gases.

#### **Special Operations**

Before use as oxygen scavenger, the copper oxide needs to be reduced according to the following reaction:

$$CuO + H_2 \Rightarrow Cu + H_2O \Delta_RH = -84.5 \text{ kJ/mol}$$

This activation step is generally carried out by heating up to  $200^{\circ}\text{C}$  /  $400^{\circ}\text{F}$  with a flow of inert gas (typically a nitrogen stream) containing 2-4% vol./vol.  $H_2$  depending on the size of the vessel and the respective heat losses.

When used for the removal of  $H_2S$ , COS and halides, a drying step with an inert gas at temperatures up to 200°C / 400°F is recommended.

#### **Poisons**

When used as oxygen scavenger or for the catalytic conversion of O<sub>2</sub>, sulfur and halide-based components are poisons for Cu-0226 S.

#### **Storage**

Cu-0226 S does not deteriorate or constitute any hazard when stored in sealed containers. The containers should not be allowed to become damp or wet.

Target Properties*	
Chemical Composition	
CuO	Approx. 10 % wt./wt.
Alumina and Promoters	Balance
Typical Physical Properties	
Surface Area	Approx. 200 m <sup>2</sup> /g
Packed ABD	Approx. 0.85 kg/l

<sup>\*</sup>These indicative properties do not represent process capabilities nor specifications.

#### **Packaging (Typical)**

- 100 lbs (45.359 kg) in 22-gallon (83 liter) steel drums
- 300 lbs (135.078 kg) in 210 liter steel drum (8x14 mesh only)

#### **Delivery Point**

Elyria, Ohio, U.S.A.

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