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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_2 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

1. Removal by chemisorption of O_2 from inert gases at ambient temperatures e.g., when used in glove boxes.
2. Catalytic removal of O_2 from gases at temperatures beyond 100°C / 210°F.
3. Removal of H_2S, COS and halides from gases.

Special Operations

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

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

This activation step is generally carried out by heating up to 200°C / 400°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_2, 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^2/g
Packed ABD	Approx. 0.85 kg/l

*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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