

Product Data Sheet

0.5% Ru/AT R 4871

DeOxo™ E

BASF DeOxo™ E / R4871 is used for the low temperature methanation of H₂ and CO mixtures. It can also be used for the methanation of CO₂.

General

DeOxoTM E/R4871 is a catalyst in the form of tablets with nominal dimensions of 3 x3 mm and with Ruthenium as active component. The material is delivered dry and reduced.

Product Applications

DeOxo™ E/R4871 is used for the low temperature methanation (also referred to as super methanation) of H₂ and CO mixtures:

$$3 H_2 + CO \rightarrow CH_4 + H_2O$$
 $\Delta_R H = -206 \text{ kJ/mol}$

With $DeOxo^{TM}$ E/R4871, this reaction can be carried out at temperatures as low as $180 - 190^{\circ}C$ (355 - 375°F).

The methanation of CO₂ according to the following reaction is also possible.

$$4 H_2 + CO_2 \rightarrow CH_4 + 2 H_2O \Delta_R H = -165 \text{ kJ/mol}$$

Special Operations

DeOxo™ E/R4871 might gain maximum activity via a short activation procedure. Before unloading, the material should be oxidized.

Poisons

Ruthenium is very sensitive to sulfur components and heavy metals. Thus, it is important to ensure that any feed coming in contact with DeOxo™ E/R4871 is free of these components.

Storage

DeOxo™ E/R4871 does not deteriorate or constitute any hazard when stored in sealed containers. The containers should not be allowed to become damp or wet and should not be stored in contact with organic or easily oxidized vapors. For further information on storage, do not hesitate to contact BASF for further information.

Typical Properties	
Chemical Composition	
Ru on Alumina	0.5 % wt./wt.
Tapped Bulk Density	
CBD, g / cm	1.1
Surface Area	
S.A. (BET), m ² / g	90

Packaging

- 62 I fiber drums (up to 50 kg net)
- 213 I (55 gallon) steel drum (up to 180 kg net)

Delivery Point: Rome, Italy

About Us

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