

0.3% Pd/AS R4578

DeOxo DS3

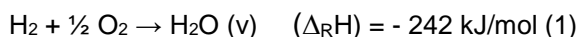
DeOxo DS3 / R4578 is used for the removal of hydrogen by reaction with oxygen (De-oxo reaction).

General

DeOxo DS3 / R 4578 is a catalyst in the form of spheres with a nominal diameter of 2.4 – 4 mm and with Palladium as active component. The lower surface alumina carrier has been carefully chosen for providing optimum activity and high selectivity.

Product Application

DeOxo DS3 / R4578 is used for the conversion of hydrogen in the presence of oxygen to form water (De-oxo reaction) according to the following chemical formula



This reaction can be applied in the production of pure hydrogen or in the production of inert gases like N₂ or He, when adding hydrogen to remove oxygen. An alternative material for this application can be

0.5% Pd/AS R4577 (DeOxo DS)

Due to the high exotherm of reaction (1), proper instrumentation and safety measures always need to be put in place to assure full control of the reaction.

Typical reaction temperatures are in the range of 50 – 100°C / 120 – 210°F. The maximum allowable temperature is 500°C / 930°F.

Special Operations

DeOxo DS3 / R4578 might gain maximum activity

via a short activation procedure. Before unloading, the material should be oxidized.

Poisons

As every Pd containing catalyst DeOxo DS3 / R4578 is sensitive against Sulfur and its components. Heavy metal containing compounds like AsH₃ can also have a detrimental effect on its performance. CO will have an impact on activity but might be compensated e.g. via higher temperature.

Storage

DeOxo DS3 / R4578 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 oxidizing vapors.

Target Properties

Chemical Composition (dry basis)	0.3 % wt./wt. Pd on special Alumina
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Typical Physical Properties

Packed Bulk Density, g/ml	0.7
Total Surface Area (BET), m ² /g	90

Packaging

- 210 l steel drum with nominal 140 kg net
- 30 l fiber drum with nominal 30 kg net

Point of Shipment

- Rome, Italy

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Americas

BASF Corporation
25 Middlesex/Essex Turnpike
Iselin, New Jersey, 08830, USA
Tel : +1-732-205-5000
Fax: +1-732-205-7725
Email: catalysts-america@basf.com

Asia Pacific

BASF (China) Company Limited
300 Jiang Xin Sha Road,
Pudong, Shanghai 200137
P.R. China
Tel: +86-21-2039 2549
Fax: +86-21-2039 4800-2549
Email: catalysts-asia@basf.com

Europe, Middle East, Africa

BASF De Meern BV Catalysts
The Netherlands
Tel: +31-30-666 9437
Email: catalysts-europe@basf.com

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