

# Purivate™ Pd15 S 2-4 mm

## Pd Impregnated Spheres

**Purivate™ Pd15 is a newly developed catalyst for the removal of oxygen by reaction with hydrogen (De-oxo reaction) with a focus on H<sub>2</sub> generated in electrolysis.**

**Purivate™ are Catalysts and Adsorbents that enable sustainable technologies and help drive the energy transition forward.**

### General

Purivate™ Pd15 is a catalyst in the form of spheres with a nominal diameter of 2 – 4 mm and with Palladium as active component.

### Product Application

Purivate™ Pd15 has been developed for the conversion of oxygen with hydrogen to form water (DeOxo reaction) according to the following chemical formula



This reaction is applied in the production of pure hydrogen coming e.g. from electrolysis as part of the production of green H<sub>2</sub>.

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 in H<sub>2</sub> containing streams is 300°C / 570°F.

### Special Operations

Purivate™ Pd15 might gain maximum activity via a short activation procedure. Before unloading, the material should be oxidized.

### Poisons

As every Pd containing catalyst Purivate™ Pd15 is sensitive against Sulfur and its components. Heavy metal compounds like AsH<sub>3</sub> will have a detrimental effect on its performance. CO will have an impact on activity but can be compensated e.g. via temperature.

### Storage

Purivate™ Pd15 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

<b>Chemical Composition (dry basis)</b>	0.15 % wt./wt. Pd on special Alumina
---	---

### Typical Physical Properties

Packed Bulk Density (sock), g/ml	0.70
----------------------------------	------

\* These indicative properties do not represent process capabilities nor specifications.

### Packaging

- 210 l steel drum with up to 140 kg (308.6 lbs) net
- 32 l fiber drum with up to 25 kg (55.1 lbs) net

### Point of Shipment

Rome, Italy

## About Us

BASF is a leading global manufacturer of catalysts for the chemical industry, with solutions across the chemical value chain. The business comprises chemical catalysts, adsorbents and custom catalysts. Priority is given to developing new and improved products that enable the chemical industry transformation to net-zero emissions.

BASF's chemical catalysts and adsorbents business is part of the company's Performance Chemicals division. The division's portfolio also includes refinery catalysts, fuel and lubricant solutions, as well as oilfield chemicals and mining solutions. Customers from a variety of industries including Chemicals, Plastics, Consumer Goods, Energy & Resources and Automotive & Transportation benefit from our innovative solutions.

**BASF - We create chemistry**



[chemical-catalysts-and-adsorbents.basf.com/](https://chemical-catalysts-and-adsorbents.basf.com/)

### Americas

BASF Corporation  
Phone: +1-732-205-5000  
Email: [catalysts-america@basf.com](mailto:catalysts-america@basf.com)

### Asia Pacific

BASF (China) Company Limited  
Phone: +86-21-2039 2549  
Email: [catalysts-asia@basf.com](mailto:catalysts-asia@basf.com)

### Europe, Middle East, Africa

BASF Services Europe GmbH  
Phone: +49-30-20055000  
Email: [catalysts-europe@basf.com](mailto:catalysts-europe@basf.com)

*Purivate* is a registered trademark of BASF

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required. © 2015 BASF

BASF- 10767 04/25