

0.5% Pt/AT R4751

DeOxo M

BASF DeOxo M / R4751 is a uniform grey cylindrical alumina pellet used typically for the catalytic conversion of oxygen or hydrogen (DeOxo reaction)

General

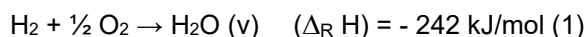
R4751 /DeOxo M is a catalyst in the form of tablets with nominal dimensions of 3 x 3 mm (approx. 1/8" x 1/8") and with Platinum as the active component. The carefully selected surface area of the carrier allows for high activity and high temperature stability. At the same time, the material shows low pressure-drop in gas phase applications due to its size.

When delivered from Seneca, SC, USA, the material is referred as 0.5% Pt/AT2 R.

The material is delivered reduced and dried.

Product Application

R4751 is used to promote the catalytic conversion of hydrogen or oxygen. The reaction can be described by the following chemical formula



Applications can be:

- Removal of traces of oxygen from hydrogen
- Removal of traces of oxygen from carbon monoxide or carbon dioxide
- Removal of hydrogen from carbon dioxide by reaction with oxygen (H₂ safety reactor in urea plants)
- Conversion of isotopes of hydrogen

BASF can provide, upon request, technical advice and recommendations on catalyst operating conditions and reactor layout.

An alternative material for these applications can be:

0.5% Pt/AS R4753 (DeOxo MS)

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 ambient up to 200°C / 390°F depending on the application. The maximum allowable temperature is 500°C / 930°F.

Special Operations

R4751 might gain maximum activity via a short activation procedure if used in a reduced state. Before unloading, the material should be oxidized.

Poisons

R4751 will last for very long times as long as it is not subjected to poisoning by certain impurities. The principal poisons are Sulphur, chlorine compounds, oil, unsaturated hydrocarbons and the vapors of some organic solvents. These materials will deactivate and may eventually poison the catalyst permanently.

Storage

R4751 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)	0.5% wt./wt. Pt on Alumina
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Typical Physical Properties

Packed Bulk Density, kg/l	1.0
Total Surface Area (BET), m ² /g	90

Packaging

- 64 l fiber drums with up to 50 kg net (Rome)
- 105 l fiber drums with up to 50 kg net (Seneca)

Point of Shipment

- Rome, Italy
- Seneca, Sc, USA. (material is referred to as 0.5% Pt/AT2 R)

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.

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