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Product Data Sheet

PuriStar® R9-PAR S3

Bismuth Oxide on Proprietary Extrudates

BASF adsorbent R9-PAR is a cylindrical adsorbent for removing preferably Arsine and Phosphine from hydrocarbon streams in the presence of hydrogen or multiple unsaturated components.

Product and Application

BASF PuriStar R9-PAR is a newly developed, proprietary adsorbent aimed at replacing lead oxide containing adsorbents.

It is produced as bismuth oxide on a proprietary cylindrical carrier with a nominal diameter of 3 mm. It is designed to preferably remove trace levels of arsine and phosphine from gaseous and liquid feedstocks and process streams.

R9-PAR is applicable for the purification of hydrogen rich gas (e.g. cracked gases), where other metal oxides cannot be used due to their reactivity toward the hydrogen content in the gas stream.

Because R9-PAR does not promote polymer formation, it is especially suitable for streams containing acetylenes or dienes, which tend to foul other types of guard bed materials. R9-PAR is excellent for C2 and C3 guard beds in steam crackers.

R9-PAR is sensitive to sulfur components. Sulfur components will lead to a decrease in capacity for arsine and phosphine. For streams containing sulfur components, BASF is offering PuriStar R9-SR as alternative for lead oxide containing adsorbents.

A drying step is required for maximizing the removal efficiency of the adsorbent. Please contact BASF for further details.

Operating Temperature

Process and composition dependent: typically, ambient to 60°C (140°F). The catalyst itself is stable at temperatures up to 350°C (660°F).

Typical Properties	
Bulk Density, g/cc	~ 1.0
lbs/ft^3	~ 62.4
Chemical Analysis	
Bi_2O_3, wt. %	~ 10

Packaging

- 1150 l super sacks (Flexible FIBC) with 500 kg net
- 210 steel drums with 115 kg net

Shipping Point

- Ludwigshafen, Germany)

Other shipping points might be available on request.

About Us

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success.

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