PETROCHEMICALS

PF-4-Unibon Catalyst

UOP's catalyst for Pyrolysis Gasoline (Pygas) Hydrotreating

Description

PF-4 is used for the saturation of diolefins and vinyl aromatics typically found in Pygas.

Applications

PF-4 catalyst is used in the first stage of the UOP Pygas Hydrotreating Process for production of hydrotreated Pygas. The hydrogenation selectivity of diolefins to olefins, but not saturates, allows for reactor temperature control leading to cycle lengths. The first stage is normally followed by second stage Pygas hydrotreating where the remaining olefins are saturated and hydrodesulfurization, and denitrogenation reactions take place. The catalysts and process are designed to result in low aromatic saturation. The now stable Pygas product could be routed to variety of downstream processes including Sulfolane for the extraction and recovery of aromatics to the aromatics complex.

Experience

PF-4 catalyst was commercialized prior to 1973 and is an optimized version of UOP's long history of earlier generation Pygas hydrotreating catalysts.

Typical Physical Properties (nominal)

Shape	Sphere
Median diameter, mm (inch)	1.60
Loaded ABD, kg/m^3 (lb/ft^3)	517.5
Metals	Palladium

Packaging

- 55 U.S. gallon (210 liter) steel drums
- Net weight per drum of 100 kg

Safe Handling and Disposal

To ensure safe handling and disposal of this material, refer to the PF-4 MSDS, the Operating Manual or contact your UOP technical representative.



The improved hydrogenation selectivity of diolefins to olefins, but not saturates, allows for better reactor temperature control leading to longer cycle lengths.

FEATURES & BENEFITS

- Palladium concentration designed for saturation selectivity of diolefin to olefins
- Saturation of vinyl aromatics that would otherwise result in downstream fouling
- Tailored support for low fouling/plugging of active sites
- Long cycle lengths of up to 5 years
- Very good performance after hot hydrogen strip

For more information

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