Honeywell | UOP Catalysts

UOP I-84 Penex™ Catalyst

Chlorided alumina C_5-C_6 isomerization catalyst for upgrading naphtha

Description

I-84 Penex catalyst is an amorphous, chlorided alumina catalyst containing platinum that is used to produce high octane C_5-C_6 isomerate typically used for blending into the gasoline pool.

Application

I-84 Penex catalyst is optimized for use in the UOP Penex process, and is particularly suited for feedstocks that contain a high concentration of benzene and C_6^+ cyclic hydrocarbons. The catalyst selectively converts normal butane, pentane, and hexane to higher octane branched hydrocarbons. In addition to isomerization of paraffins, I-84 Penex catalyst saturates benzene. The catalyst is designed to operate over a wide range of reaction conditions and feedstocks to maximize isomerization and minimize hydrocracking.

Experience

I-84 Penex catalyst is an extension of UOP's industry leading isomerization catalyst technology and has been in commercial operation since 2003 with more than 15 sales. UOP isomerization catalysts have demonstrated very long lives relative to other commercially available chlorided alumina catalysts.

Physical Properties

ABD (sock), lb/ft³ (kg/m³)	49.0 (785)
ABD (dense), lb/ft³ (kg/m³)	52.1 (835)
Nominal diameter, inch (mm)	1/16 (1.6)
Shape	Trilobed Extrudate
Metals	Platinum

Safe Handling and Disposal

The handling, storage, transportation and disposal of I-84 Penex catalyst is subject to governmental regulation, and you must manage it safely and in accordance with all applicable requirements.



UOP I-84 Penex catalyst is a low platinum fill cost solution that still has superior activity and excellent resistance to water and other contaminants.

Packaging

- 55 U.S. gallon (210 liter) steel drums
- Net weight per drum 150 kilograms

FEATURES & BENEFITS

- Superior activity and conversion to iso-paraffins
- High isomerate octane at equivalent catalyst loadings
- Capability of processing C_4, C_5, and C_6 feeds with relatively high benzene and C_6^+ cyclic hydrocarbon content
- Volumetric yields typically exceed 99 LV%
- Complete benzene saturation for typical feeds
- For feeds with higher benzene and C_6^+ cylic hydrocarbon content, UOP's I-82 catalyst (higher platinum content compared to I-84) should be considered
- Catalyst is certified by performance testing

For more information
www.uop.com

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