



R-272™ and R-274™ Catalysts

Reforming Catalyst

Description

UOP's R-270™ series reforming catalysts are used to produce high-octane reformate and hydrogen. R-272 catalyst is a high platinum version. R-274 catalyst is a lower platinum version.

Applications

R-270 series catalysts are specifically designed for use in continuous regeneration reforming applications and are excellent catalysts for low operating pressure reforming applications. Continuous regeneration reforming units such as the CCR Platforming™ process uses a moving bed of spherical catalyst to convert low-quality naphtha, in the presence of hydrogen, into motor fuel blending stocks for gasoline, BTX aromatics, and high-purity hydrogen for other refinery processes that consume hydrogen. The R-270 series catalyst is specifically designed for use with paraffinic, lower endpoint feedstocks in high severity operations.

Features and benefits

The R-270 series catalysts are part of UOP's R-200™ series catalyst. The R-270 series catalysts offer the highest C₅⁺ and hydrogen yields while also providing the lowest coke production. The enhanced flexibility is demonstrated in the following example, based on a typical 20,000 BPSD CCR Platforming unit. The benefits are relative to R-130™ series catalyst.

Increased yields

- 1.5 lv-% more C₅⁺ yield
- 1.4% more octane-bbls
- 70 SCFB (12 Nm³/m³) more H₂ production
- 25 wt-% less coke

Increased severity

- 0.9 RONC increase
- 1.0% more octane-bbls
- 130 SCFB (22 Nm³/m³) more H₂ production

Increased capacity

- 12.5% higher throughput
- 14% more octane-bbls
- 65 SCFB (11 Nm³/m³) more H₂ production
- 1.1 lv-% more C₅⁺ yield

In addition to the above benefits, the R-270 series catalyst has the same long catalyst life as the R-130 series catalyst.

Experience

R-274 catalyst was commercialized in January, 2002 and over 10 units are in commercial operation.

Physical properties

Circulating ABD, lb/ft ³ (kg/m ³)	33.5 (537)
Static ABD, lb/ft ³ (kg/m ³)	35.0 (561)
Nominal diameter, inch (mm):	1/16 (1.6)
Shape	Sphere
R-272 platinum, wt-%	0.375
R-274 platinum, wt-%	0.290

R-270 series catalysts can be supplied in oxidized or reduced form.

Packaging

- 55 U.S. gallon (210 liter) steel drums
- Net weight per drum of 250 pounds or 100 kilograms
- For shipments from North America, super sacks or flow bins are available upon request.

For more information

For more information, contact your local UOP representative or our Des Plaines sales office:

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