T E C H N I C A L D A T A S H E E T

Ionex® – Type O-P Catalyst

Hydrous Ferric Oxide

A specially manufactured catalyst used in hydrogen liquefaction and storage systems.

molecular

Description

Ionex® –Type O-P Catalyst is a specially manufactured catalyst used in hydrogen liquefaction and storage systems. This material efficiently catalyzes the conversion of ortho hydrogen to para hydrogen. Due to its large surface area and particle size uniformity, rapid conversion and uniform flow characteristics are assured.

Typical properties		Test method
Chemical formula	Fe_2O_3	
Apparent density	1.20 – 1.37 g/cc	ASTM D2854
Moisture content, as packed	<2%	ASTM D2867
Space Velocity	1200 cc H_2/min./cc of ferric oxide	

Standard mesh size (US Sieve)	Test method
30 x 50	ASTM D2862

Particle size distribution

Oversize maximum	5%
Nominal mesh size	90% minimum
Undersize maximum	5%

Packaging

Packaging is dependent on quantity. Orders in excess of 200 lbs. are generally packaged in 30- to 55-gallon steel drums under an inert atmosphere. Product is shipped in a highly active state and must remain in its original packaging until its intended use.

Activity criteria

The catalyst will achieve 46.5% or higher of para hydrogen after 16 hours of reactivation @ 160 C with dry hydrogen flow, when fed an equilibrium mixture of 75% ortho and 25% para hydrogen @1.36 atmospheres and 77 K, and a flow rate of 1200cc (STP) per minutes per cc of catalyst. Contact Molecular Products for typical performance data.

Note: This spec sheet indicates physical properties that are standard and typical. Molecular Products Inc. will meet specifications as required.

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