

# Ionex<sup>®</sup> – Type O-P Catalyst

## Hydrous Ferric Oxide

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



**molecular**

### Description

Ionex<sup>®</sup> –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
<b>Chemical formula</b>	Fe <sub>2</sub> O <sub>3</sub>	
<b>Apparent density</b>	1.32 ± .07 g/cc	ASTM D2854
<b>Moisture content, as packed</b>	<2%	ASTM D2867
<b>Space Velocity</b>	1200 cc H <sub>2</sub> /min./cc of ferric oxide	

### Standard mesh size (US Sieve)

	Test method
<b>30 x 50</b>	ASTM D2862

### Particle size distribution

<b>Oversize maximum</b>	5%
<b>Nominal mesh size</b>	90% minimum
<b>Undersize maximum</b>	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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