

## WP-2 PRODUCT DATA SHEET

### **Purity Systems Inc. Silica Based Technologies for a Cleaner Environment and Advanced Hydrometallurgy/IX**

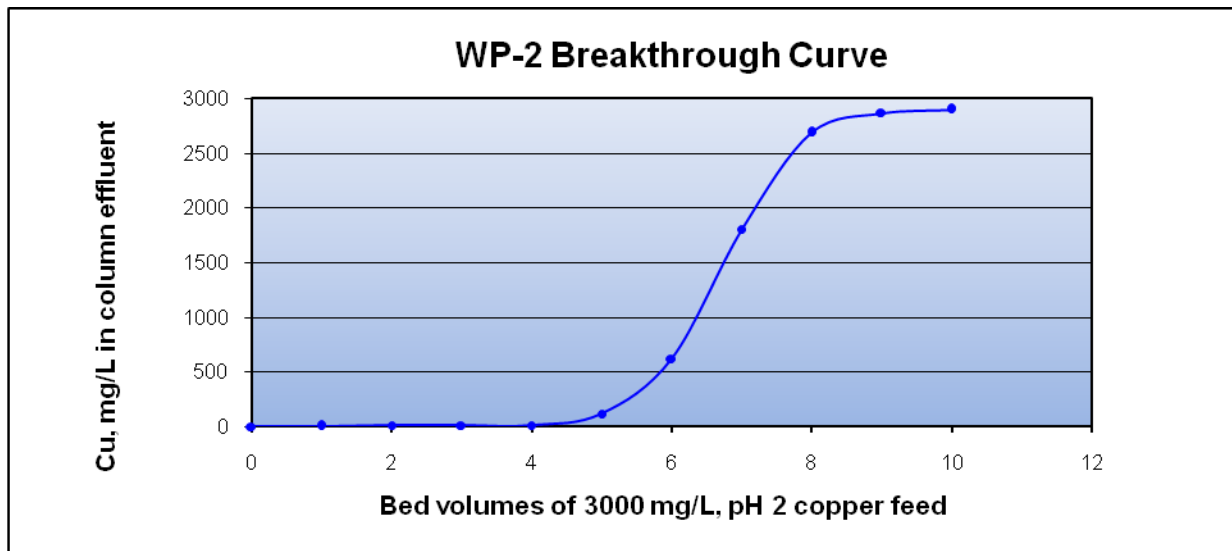
PSI has developed a complete line of metal ion recovery materials for applications in the mining, electroplating and environmental remediation industries. Below are the general characteristics and the range of properties of WP-2 followed by a summary of standard test results.

#### **Physical and Chemical Characteristics of WP-2 Purity Systems Silica Polyamine Composite**

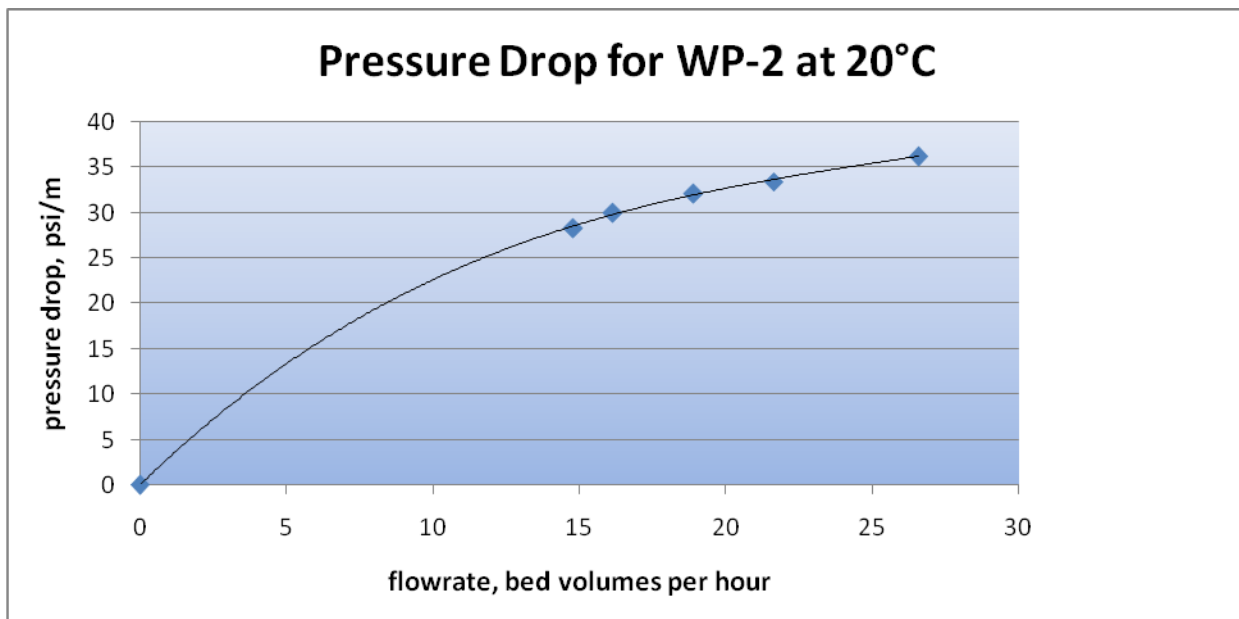
Matrix.....	Modified Hydrophilic Polymers Grafted to Amorphous Silica Gel
Physical Form and Appearance.....	Off-white to Tan Irregular or Spherical Particles
Functional Groups.....	Iminoacetic acid
Form (as shipped).....	Acid
Screen Size Range.....	> 90% 180-250 micron
Moisture Content (as shipped).....	≤ 10 %
Reversible Swelling.....	0%
Specific Gravity (dry).....	0.50 – 0.56
Total Copper Exchange Capacity (flow at pH=2).....	24 g/kg, 13 kg/L
Maximum Operating Temperature of feed solution (tested so far).....	90°C
pH Range .....	usable pH range: 0-11
Pressure drop at 20 BV/h flow.....	33 psi/m or 2.2 bar/m

## Performance Specifications

The graph illustrates the copper capacity of WP-2 under ideal conditions, using a 3000 mg/L Cu(II) solution at pH 2, loading and eluting at 0.1 BV/min in a 10 cc column. Flow capacity at 10% breakthrough is 24 g/kg or 13 g/L at pH 2.



The graph shows the pressure drop per meter of WP-2 as a function of flowrate at 20°C. A flowrate of 20 bed volumes per hour produces a pressure drop of 33 psi/meter, or 2.2 bar/meter.



### Basic Product Warranty

The product will conform to the specifications that were tested under the seller's own standard conditions (see figures above). The actual performance will vary according to the conditions of use. Sufficient bench scale testing on the particular feed and process should be performed before production scale application. This particular product should be used only up to pH 11.