

## PSM Industries PolyAlloys MIM-14-4PH Heat Treated Stainless Steel

Category : Metal , Ferrous Metal , Stainless Steel

### Material Notes:

PolyAlloys Injected Metals, a division of PSM Industries, Inc., offers precision, High-Performance components for structural, magnetic and electronic applications that require a high degree of complexity and near full theoretical density by utilizing Metal Injection Molding (MIM). MIM can economically produce complex shapes beyond the capability of conventional Powdered Metallurgy. Benefits of Metal Injection Molding 96-98% of Theoretical Density Excellent Mechanical Properties Avoids Costly Secondary Operations Excellent Surface Finishes Capable of Extreme 3-D Geometries Holds Tight Tolerances Extremely Thin Wall Section Capabilities Information Provided by PolyAlloys, a division of PSM Industries

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_PSM-Industries-PolyAlloys-MIM-14-4PH-Heat-Treated-Stainless-Steel.php](http://www.lookpolymers.com/polymer_PSM-Industries-PolyAlloys-MIM-14-4PH-Heat-Treated-Stainless-Steel.php)

| Physical Properties | Metric    | English                  | Comments |
|---------------------|-----------|--------------------------|----------|
| Density             | 7.50 g/cc | 0.271 lb/in <sup>3</sup> |          |

| Mechanical Properties      | Metric          | English         | Comments          |
|----------------------------|-----------------|-----------------|-------------------|
| Hardness, Rockwell C       | 33              | 33              | Macro             |
|                            | 40              | 40              | Micro             |
| Tensile Strength, Ultimate | >= 1070 MPa     | >= 155000 psi   |                   |
|                            | 1190 MPa        | 172000 psi      | Typical           |
| Tensile Strength, Yield    | >= 965 MPa      | >= 140000 psi   |                   |
|                            | @Strain 0.200 % | @Strain 0.200 % |                   |
| Elongation at Yield        | 1090 MPa        | 158000 psi      |                   |
|                            | @Strain 0.200 % | @Strain 0.200 % |                   |
| Elongation at Yield        | >= 4.0 %        | >= 4.0 %        | in 1 in.          |
|                            | 6.0 %           | 6.0 %           | in 1 in.; Typical |
| Modulus of Elasticity      | 193 GPa         | 28000 ksi       |                   |

| Descriptive Properties | Value  | Comments  |
|------------------------|--------|---|
| Corrosion Resistant    | <0.005 | H <sub>2</sub> SO <sub>4</sub> g/dm <sup>2</sup> /day |
|                        | Pass   | SuSO <sub>4</sub>                                     |
|                        | Pass   | Boil Test (H <sub>2</sub> O)                          |

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