

XIOM 100

Description: Co-polyamide resin powder modified for thermal spray powder coating. Designed for excellent abrasion and wear characteristics, low coefficient of friction, good solvent and chemical resistance. Minimizes shrinkage and edge pull back typically experienced with some Nylon 11 coatings and does not require liquid primers as does Nylon 11.

Application Data: Surface preparation
Refer to the Coatings Manual for proper substrate preparation. Each substrate material, i.e. steel, aluminum, masonry, fiberglass, wood, tile, plastics etc. requires special considerations before spraying.

Typically, prior to spraying all substrates should be cleaned and degreased. Some roughening is advisable for thick coatings. Liquid primers are not required when surface is properly prepared and application is interior. If necessary, use XT750 bond coat for all substrates except steel. For steel substrates and exterior applications use XT765 zinc primer bond coating to retard corrosion.

Thermal spraying

Refer to XIOM's Thermal Spray Manual for detailed processing guidelines. Before spraying, the surface to be coated should be heated to approximately 180°F. The spray torch or other heating device can be used.

Begin spray immediately; the surface temperature will rise to 200°F plus during spray as the plastic stream melts (wets) on impact forming a continuous cured film. No bond coating required when this procedure is followed.

Technical Specifications:

Typical powder information	Fine powder specially sized for thermal spray
Coverage (100% efficiency)	100 to 150 sq ft/ lb. / mil
Particle size	90% between 20 and 63 um
VOC content	None
Thickness (recommended minimum)	5-20 mils
Storage stability	Unlimited shelf life if stored < 90° F

Coating Performance Properties:

Performance properties	Testing Method	Results
Specific gravity	ASTM D 792	1.04 – 1.35 g/cc
Adhesion		
Hardness (Shore D)	ASTM D 2240	75
Impact resistance (direct)	-	Excellent
Flexibility	-	Excellent
Permeability	-	Low absorption of H ₂
Tensile, PSI (Instron) yield	ASTM D 638	4500 – 4800 PSI
Taber abrasion	ASTM D 4060	10-12 mg loss, CS 17 wheels 1000 gm load, 1000 cycles
Cavitation erosion	ASTM 6-32-98	0.3 um/hr loss vs. stainless steel at 1.0 um/hr loss
Salt spray	ASTM B-117	No corrosion after 2000 hrs
Humidity resistance		Low moisture absorption
Shear strength	ASTM D 732	5100 – 6100 PSI
Abrasion resistance	ASTM D 4060	5 – 8 mg
Melt point		184 – 194 °C (370-381°F)
Flammability	ISO 3795	DNI. Self extinguishes

Material Spray Parameters:

n/a

Comments:

Many colors available, refer to the color chart and the appropriate post coating number sequence. The first two numbers indicate the color and last

two numbers identify the shade.

**Coating
Characteristics:**

- Shows no deterioration in properties when exposed to most ferocious corrosives, aliphatic and aromatic hydrocarbons, bases, salt solutions, marine environments, oils, greases and petroleum products.
- Has cavitation erosion resistance more than 75 times better than 3M's Scotchkote 206N fusion bonded epoxy.
- Low moisture absorption.
- High UV stability promotes better outdoor weathering properties.
- High impact, wear and abrasion resistance.
- Approved for water/food contact.
- High flexibility.
- NSF approved for potable water systems. Black, blue, and white polyamides are NSF approved.

XIOM 100 thermal spray coatings are highly durable and offer long-lasting corrosion protection for metal against chemicals, salt spray, weathering and airborne pollutants. Coatings will not chalk or discolor.

**Health and
Safety:**

XIOM 100 is supplied as a finely divided powder. While there are no known health hazards associated with this powder, normal precautions for dealing with fine organic powders should be taken, i.e., excessive dust generation and inhaling of the powder should be avoided. Always wear a proper dust mask and adjust facilities for removing excess dust from the working area during handling. Before thermal spraying, refer to the MSDS and Thermal Spray Manual for proper precautions to avoid exposure to polyamide combustion products.

It should be appreciated that the information given here is, to the best of our knowledge, true and accurate. However, since conditions under which our materials and equipment may be used are beyond our control, recommendations are made without warranty or guarantee.

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For ordering information, please contact your regional distributor.