



# XIOMTEK 490

**Description:**

A patent pending thermal spray powder comprising modified nylon and thermoset resins plus phosphorescent green pigment. This coating is a multi phase, "glow in the dark" product. It deposits as a light green coating, it bonds readily to most surfaces including steel, aluminum, fiberglass, masonry and wood by gripping deep into surface imperfections as it flows and wets to form smooth and continuous films.

Use as a one step coating applied directly to the substrate for both indoor and outside applications. No liquid primer or bond coat required. For thin coatings i.e. less than 0.010" use XT600-01-04 as a white first coat for best glow response.

Specially designed for thermal spraying. Xiomtek 490 powder overcomes many of the bonding problems normally encountered when thermal spraying generic plastic powders.

**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.

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 is needed when this procedure is followed.

Spraying may be done at the shop or on-site.

**Technical Specifications:**

Typical Powder Information	Fine light green powder sized for thermal spraying
Coverage (100% efficiency)	88 - 92 sq ft / lb. / mil 4 - 4.5 sq ft / lb. / 20 mils thick
Particle size	90% less than 53 um
VOC content	None
Thickness	20 mils recommended. Coatings exceeding 20 mils may craze crack. For lower thickness contact XIOM.
Storage stability	Unlimited shelf life if stored < 90° F

**Coating Performance Properties:**

Performance Properties	Testing Method	Results
Specific gravity	Calculated	2.375 g/cc
Adhesion	Bend test	Outstanding
Hardness (Shore D)	ASTM D 3363	Pencil hardness HB-2H
Impact resistance (direct)	--	Very good
Flexibility	--	Outstanding
UV resistance	--	
Tensile strength (PSI) (Instron) yield	ASTM D 638	NA
Salt spray resistance		Excellent
Humidity resistance		Excellent
Melt point and service temperature		230F (110 C). Continuous service temperature not to exceed 180F (82.2).
Flammability	FMVSS 302 09-98	DNI. Does not support combustion during or after ignition.

**Material Spray Parameters:**

n/a

**Comments:**

The multiplex technology in Xiomtek 490 is patent pending and unique to the powder coating industry. Specially formulated for thermal spraying, this hybrid powder is designed to achieve high deposit efficiency, very strong substrate adhesion plus easy wetting and flow, thus forming continuous impermeable smooth coatings with phosphorescent pigment for glow in the dark properties.

**Coating  
Characteristics:**

- Weatherable finish with excellent physical properties.
- Smooth lime green coating, when exposed to UV radiation will glow green in the dark.
- Outstanding flexibility between freezing and 175F (80C).
- Low moisture absorption.
- Tough and adherent coatings.
- Good UV stability promotes better outdoor weathering properties.
- High impact, wear resistance.

XIOMTEK 490 is designed for one step application to most substrates without the need for bond coats or primers. It is easy to spray and forgiving of most thermal spray problems. The coatings have excellent bonding attributes and no edge pull back.

Some recommended on-site applications include:

- Glow in the dark coatings on steel, concrete, masonry, drywalls, fiberglass and wood for interior applications.
- Especially effective when the loss of power causes blackouts and light is needed for emergency exit use.

In total darkness, glow coatings will provide light for up to 10 hours. Sunlight for 30 minutes or fluorescent light for 1 to 2 hours is sufficient to fully charge the coating for emergency use.

We do not believe glow coatings will be useful in exterior applications. Ambient lights, i.e. street lights, moon light, etc. are enough to diffuse the coatings fluorescent glow to make it's effect barely discernable.

**Health and  
Safety:**

XIOMTEK 490 is supplied as a finely divided powder. While there are no known health hazards associated with this powder, normal handling 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.

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.

Xiom Corp. 78 Lamar Street, West Babylon, New York, 11704 (631) 643-4400 [www.xiom-corp.com](http://www.xiom-corp.com)  
For ordering information, please contact your regional distributor.