

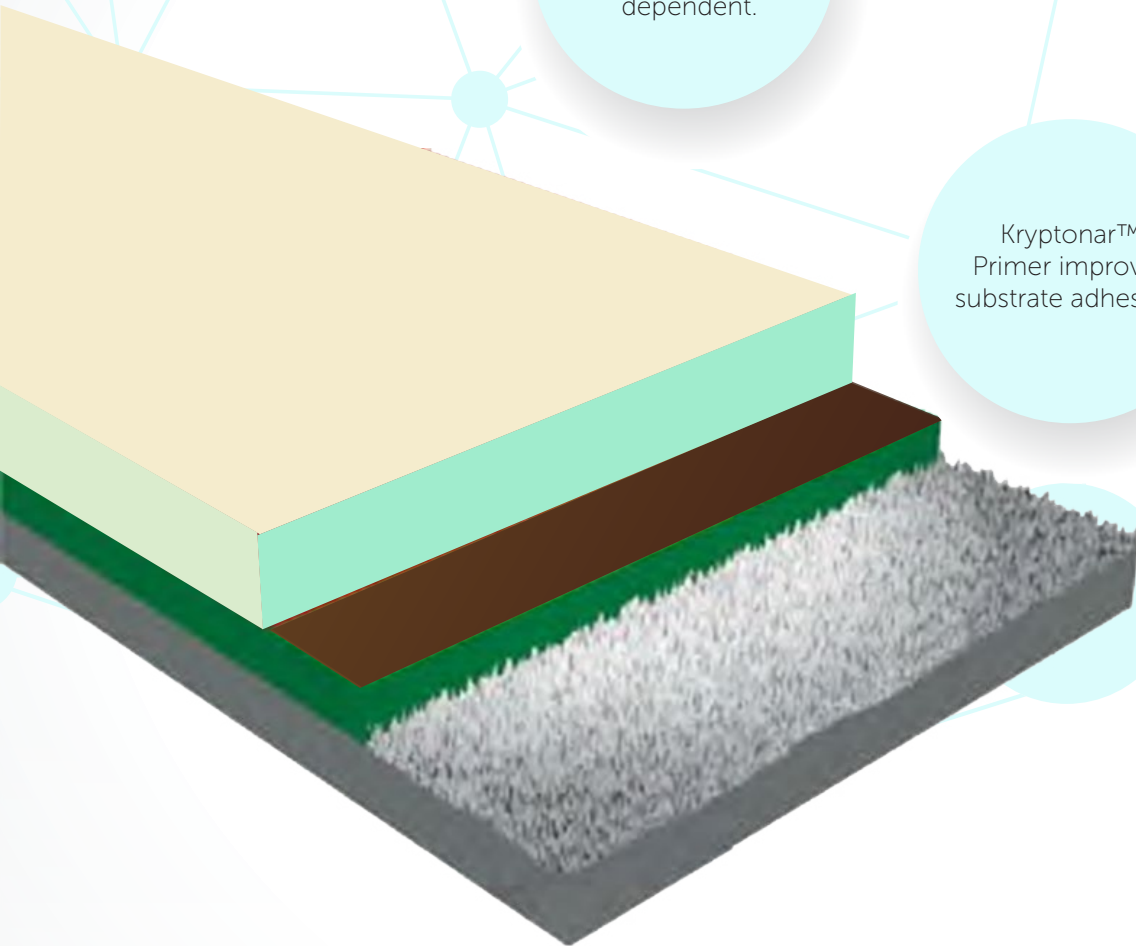


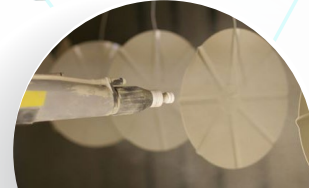
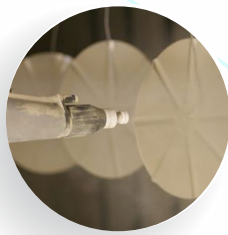
# Kryptonar™ Powder Coating Process

Kryptonar™  
Topcoat thickness  
is application  
dependent.

Kryptonar™  
Primer improves  
substrate adhesion.

Prepare substrate  
by mechanical  
blasting or chemical  
pretreatment.





### 1. PREPARATION

Any metal surface that can withstand prolonged temperature exposure of 260°C (500°F) can be powder coated including carbon steel, aluminum, stainless steel and titanium. Careful attention to part configuration is important. Areas of air entrapment must be properly vented prior to heat exposure. Surface preparation is critical in achieving strong adhesion between the part and the Kryptonar™ Primer. Any oil, scale, rust or surface impurities must be removed through the use of a solvent wash or burn-off followed by mechanical abrasion such as grit blasting. A 1 to 2 mil blast profile is required for good primer adhesion.

### 2. PREHEAT

Thicker coatings can be obtained when the part is preheated to 260°C (500°F). Depending on configuration, the part should be held at this temperature for up to two hours prior to coating. This allows the part to reach a temperature equilibrium.

### 3. PRIMER APPLICATION

Once the part has reached coating temperature, remove it from the oven and apply the Kryptonar™ Primer to the heated surface. The use of a properly grounded electrostatic powder gun allows the charged powder particles to flow towards surface of the heated part. Apply the primer in multiple light passes, with each pass completely covering the surface. A single pass will deposit a coating thickness of about 1 mil. Apply each subsequent pass at 90° to the previous pass. This will eliminate areas of thin coating.

Four passes are typically adequate for the Kryptonar™ Primer application. If the part still retains sufficient heat, a fifth and sixth pass can be made with the Kryptonar™ Topcoat.

### 4. PRIMER FUSION

The coated part is now returned to the oven for additional heat. Reduce the oven temperature to 250°C (480°F) and allow the part to remain in the oven for up to 25 minutes after the part has reached oven temperature. The surface of the part can be observed during this time. Once the part is at proper temperature, the Kryptonar™ PVDF surface will appear wet and translucent.

### 5. APPLYING TOPCOAT

When the part is removed from the oven it should be rotated 90° to prevent the coating from dripping. Again, four light passes with the Kryptonar™ Topcoat are applied. Each pass is applied at 90° from the previous application. Four passes will result in an additional coating thickness of 8 to 10 mils. If too much material is applied or the part becomes too cool, the coating may not bond to the part resulting in air entrapment or coating fall-off.

### 6. BUILDING THICKNESS

Continue to repeat the heating and powder coating processes until desired thickness is obtained. Thicker Kryptonar™ PVDF coatings can be achieved through the use of continuous rotation. Manual rotation of the part each time it emerges from the oven no longer becomes effective beyond a 30 mil coating thickness. At this point the coating will drip and run without continuous rotation.



Kryptonar™ PVDF Powder Coatings are formulated in the USA by Nile Polymers, Inc.  
Contact us at (801) 203-3756 or [sales@nilepolymers.com](mailto:sales@nilepolymers.com)

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