



Kryptonar™ PVDF Powder Coatings

Kryptonar™ PVDF powder coatings provide a high-purity surface that is used to protect metal substrates from corrosion in pharmaceutical, semiconductor and chemical process industries. This coating can be applied as an electrostatic powder or in a fluidized bed. The resulting Kryptonar™ surface is very smooth, washes down quickly and becomes cleaner with repeated use. Kryptonar™ PVDF powder coatings have the following advantages:

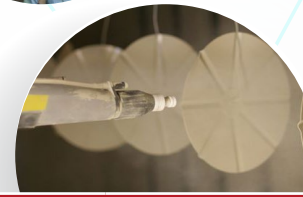
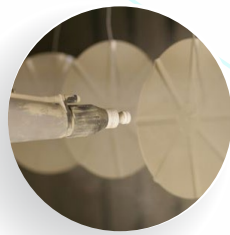
- » No flame propagation below 40% O₂ content
- » Excellent chemical resistance
- » Sterilization by gamma radiation or autoclave

- » Bio-inert USP Class VI compliant
- » Manufactured without additives or processing aids
- » Extractable contaminants at ppb level
- » Contains no additives or processing aids
- » Fine powder easily fluidizes
- » Rapidly builds thickness during coating
- » Lower processing temperature requires less energy to powder coat
- » Surface smoothness less than 20 µin
- » Tough, non-stick and scratch resistant surface

Use Kryptonar™ PVDF Powder Coatings for all your coating requirements.

Kryptonar™ Product Overview

Material	Color	Use	5 lbs.	10 lbs.	50 lbs.
Kryptonar™ Primer	Light Brown	Bonds coating to metal	Y	Y	Y
Kryptonar™ Topcoat	None	Builds coating thickness	N	Y	Y



Kryptonar™ Material Properties

Physical Properties	Standards	Units	Results
Refractive Index	ASTM D542	-	1.42
Specific Gravity	ASTM D742	-	1.77 - 1.80
Water Absorption	ASTM D570	%	0.03 - 0.05
Mechanical Properties			
Flexural Strength at 5% Strain	ASTM D790	psi	3,000 - 5,000
Flexural Modulus	ASTM D790	psi	150,000 - 180,000
Tensile Yield Elongation	ASTM D638	%	5 - 15
Tensile Yield Strength	ASTM D638	psi	4,500 - 6,000
Tensile Break Elongation	ASTM D638	%	30 - 200
Tensile Break Strength	ASTM D638	psi	4,000 - 7,000
Tensile Modulus	ASTM D638	psi	150,000 - 220,000
Deflection Temperature	ASTM D648 at 66 psi	°F	140 - 167
Hardness	ASTM D2240	Shore D	70 - 75
Thermal Properties			
Melting Temperature	ASTM D3418	°F	311 - 320
Thermal Conductivity	ASTM D433	BTU-in/hr.ft ² F	1.0 - 1.25
Electrical Properties			
Dielectric Strength	ASTM D149	KV/mil	1.3 - 1.6
Volume Resistivity	ASTM D257	ohm-cm	2 x 10 ¹⁴
Flame and Smoke Properties			
Limiting Oxygen Index	ASTM D2868	% O ₂	40

Kryptonar™ Chemical Resistance

Chemical	Concentration	Maximum Temperature °F
Acetic Acid	50% in water	200
Acetone		Not Recommended
Brine		200
Bromine, liquid		150
Chlorine, liquid		175
Chromic Acid	Up to 40% in water	175
Hydrochloric Acid	Up to "concentrated"	200
Hydrofluoric Acid	41 - 100%	200
Nitric Acid	11 - 70% in water	150
Phosphoric Acid	Less than 85% in water	200
Sulfuric Acid	Up to 60% in water	200



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

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