



Highlights

PPG's Enviracryl™ and Envirocron® powder coatings are aesthetically pleasing, produce a durable uniform finish and can be custom formulated with finishes from high gloss to low gloss, and in a variety of textures.

PPG's "World Class" Heat Resistant Envirocron® Powder Coatings are engineered to provide strong physical and chemical resistance properties and to maintain these properties during exposure to elevated temperatures. This line of Envirocron® Powders is manufactured to meet the requirements of industrial markets which require outstanding organic coating performance under demanding service conditions. These sophisticated Heat Resistant powder coatings are the solution to your durability and physical property requirements. An unsurpassed application development program enables consistently friendly use on selected substrates.

Product Features

- Excellent heat resistance
- Exterior durability
- Good chemical resistance

Technical Properties

Property	Test Method	Value
Color	_____	Hi-Temp Black
Appearance		Texture
Gloss	ASTM D-523	3.0 - 9.0 @ 60°
Adhesion	ASTM D-3359	Initial - 100% (5B Pass) Intercoat - 100% (5B Pass)
Hardness	ASTM D-3363	2H Pencil (Eagle)
Impact Resistance	ASTM D-2794	80 In.-lbs. Direct 20 In.-lbs. Reverse
Conical Mandrel	ASTM D-522	1/8" Mandrel - No Cracking
Salt Spray	ASTM B-117	1000 Hrs. Pass No adhesion loss No blistering. Slight corrosion bleed through
Humidity	ASTM D-1735	1000 Hrs. Pass No adhesion loss No blistering. Slight corrosion bleed through
Exterior Weathering	Florida 45° South	12 Months - Pass

Film Properties were determined using 2.0 - 4.0 mils powder film over chrome pretreated unpolished aluminum panels and castings. Impact Resistance and Conical Mandrel were determined at 2.0 mils. The maximum recommended film thickness is 8.0 mils. Recommended for use over aluminum and cast aluminum substrates.

Application Data

Application Type:	Electrostatic Spray
Recommended Bake:	20 Minutes at 450 °F Metal Temperature See Cure Curve PCH-001
Specific Gravity:	1.61 ± .05
Theoretical Coverage:	119 Sq. Ft. per pound at 1.0 mil
Shelf Life from Date of Manufacture (@ 40-60% RH):	70 °F Maximum - 6 Months

PPG recommends that all material be used in FIFO order (first in - first out). Materials that exceed the recommended shelf life should be tested prior to use.

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Technical Properties

Property	Test Method	Value
Heat Resistance:	ASTM D-3359	
Adhesion	(1Hr. 800° F x 4 cycles)	100% (5B Pass)
Heat Resistance:	ASTM D-523-94	
Gloss	(4 Hrs. 800° F)	5 @ 60°
QUV	ASTM G-53 & G90 (UVA 340)	1000 Hours No chalking or gloss loss No blistering, Slight haziness
Chemical, Food, Solvent Resistance		
Ammonia	24 Hrs Covered Room Temp.	No effect
Chlorine		No effect
HCl 40%		Slight haziness to film
H2SO4 40%		No effect
Anti-freeze		No effect
Mustard		No effect
Catsup		No effect
BBQ Sauce		No effect
DOT #3 Brake Fluid		No effect
Ethyl Alcohol		No effect
Coca-Cola		No effect
Easy-Off Oven Cleaner		Dulled, discolored
Crayon		No effect
Lemon Juice	4 Hrs @ 400° F After Oven Cleaner	No effect
Grease Types:		
Bacon	4 Hrs Covered 400° F	No effect
Beef		No effect
Catfish		No effect
Chicken		No effect

Product Information

The maximum recommended film thickness is approximately 7.0 - 8.0 mils. Cured films above this thickness are likely to exhibit structural porosity due to volatiles generated during the baking process. This can result in weakened physical properties (flexibility, impact resistance) and poor film cohesion. Conventional iron and zinc phosphate conversion coatings, utilized for cleaning and pretreatment of steel and aluminum prior to powder coating, do not have thermal stability at high temperatures and can degrade underneath the cured powder film. This can result in severe adhesion loss between the high temperature powder coating and the metal substrate. Also not recommended over conventional (not thermal resistant) electrocoat, liquid or powder primers. Can be applied over clean blasted or pickled steel. Rust spotting may be observed over steel substrate at 200 – 250 hours salt spray testing due to some inherent film porosity.

Maximum recommended continuous temperature exposure for this product is 600° - 650° F (315° - 343° C).

Maximum recommended intermittent temperature exposure is 800° - 850° F (427° - 454° C).

Exposure to temperatures in the 900° - 1,500° F (482° - 815° C) range is not recommended.

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