

PRODUCT DESCRIPTION

51PC100™ is a high-performance, highly fluorinated polyurethane top coat formulated for thin film applications, offering general ease of handling and application. It is a two-component, solvent based, high solids enamel system which exhibits outstanding performance properties, compared to higher build, multi-coat premium systems.

The patented "fluoroshield" protection of 51PC100™ makes it virtually impervious to moisture and oxygen permeation. 51PC100™ exhibits unsurpassed performance for all physical properties as well as resistance to chemicals, weathering and uv degradation.



CHARACTERISTICS

A high performance, inert topcoat system designed to overcoat virtually any surface and make it resistant to corrosion, UV breakdown, abrasion, graffiti and chemical attack. FPU® coatings exhibit outstanding weathering characteristics. Developed over two decades of research and development, FPU® has a proven service history.

51PC100™ is ideal for limited immersion service on marine, aerospace, architectural, industrial and automotive equipment, ferrous and non-ferrous metals, masonry, timber, fiberglass and carbon fiber. It provides a high quality finish, and offers exceptional all round performance with an expected life span exceeding 20 years.

PHYSICAL PROPERTIES

- ☑ Outstanding Hydrophobic and Oleophobic surface properties
- ☑ Impervious to moisture and oxygen permeation (osmotic barrier)
- ☑ Flexible and outstanding impact and abrasion resistance
- ☑ Low surface energy which resists soiling and marking
- ☑ Resistant to attack by hydrocarbons and chemical products
- ☑ Completely insensitive to UV radiation
- ☑ Meets or exceeds all US Military industrial coating specifications

TEST DATA

ASTM B117 Salt Spray	2,000 hrs no blisters, no creep
ASTM D3363 Pencil Hardness	2H
Accelerated QUV A	4,000 hrs 88% gloss retention, DE 1.5
Immersion H ₂ O	26,000 hrs, no blisters
Immersion Skydrol	5,000 hrs, no blisters
Taber Abrasion	500 mg, 1000 revs, 0.023g loss
Muriatic Acid 15 min spot test	No effect
Impact 1.8kg weight	25"-40", film intact
Solvent Resistance	MEK 100 double rubs, no effect
Dry Adhesion (alum chromate)	100% adhesion
Wet Adhesion (alum chromate)	100% adhesion
Graffiti Resistance	5 days complete removal, no effect



Application

For optimum appearance properties, 51PC100™ should be spray applied in two to three coats to a minimum of 2 mils DFT / 50 microns DFT. Always allow each coat to "flash off" to a tacked state prior to a following coat.

51PC100™ may also be spray applied, brushed or rolled in one coat, unreduced to the recommended DFT.

FPU® coatings must not be applied to surfaces at ambient temperatures above 35°C / 95°F. For optimum application properties, the temperature of the material should be between 10°C and 25°C / 50°F and 80°F prior to mixing and application. Apply the coating only when the surface temperature is more than 5°F or 3°C above the dew point temperature of the surrounding air and relative humidity is below 85%, in order to prevent moisture condensation on the surface.

Application Equipment

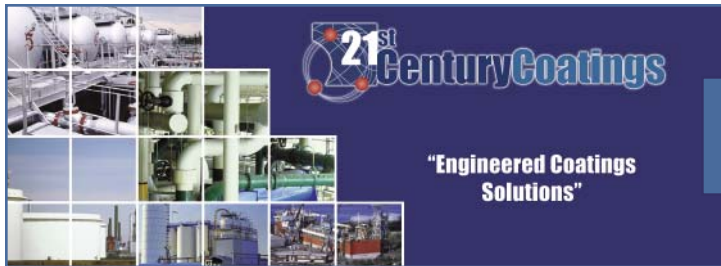
Conventional Spray Equipment

	Fluid Nozzle	Air Nozzle	Atomizing Pressure	Fluid Pressure
Binks:	63B (-.40")	63PB	45 psi	25 psi
Devilbiss	FX(.042) - FF(.055)		40-50 psi	

Airless Spray Equipment

	Airless Tip Orifice	Fluid Pressure	Binks Tip No.
Binks:	.015" - .021"	2000-2500 psi	9-1560/9-2150

Use only T-100, T-102 or T-109 reducers to adjust viscosity of FPU for spray application. MEK may be used for equipment cleaning purposes. Do not use an alcohol based solvents or mineral spirits as a reducer. Reduction of blended coating may extend pot life.



Mixing & Activation

Mixing ratio 2:1 by volume (2 parts base to 1 part activator)

Activator: 51AC100
Reduction: 00TR102 - Slow reducer
00TR109 - slow reducer (Oxsol blend)
00TR100 - Fast reducer
Spray Viscosity: 21-25 seconds #2 Zahn

51PC100™ is a two component coating system supplied in two separate containers. Part A is the base and Part B is the activator. Prior to activation, Base component (Part A) must be thoroughly mixed by mechanical agitation. Following agitation, with a paint stick, ensure all settled material is removed from the can bottom. After activation of Component A and Component B together, agitate for approximately 1-2 minutes. Reduce activated 51PC100™ to a maximum of 15% if required with recommended reducer and use immediately. 51PC100™ requires no induction period.



Pot Life

3 Hours @ 21°C / 70°F
1 1/2 Hours @ 32°C / 90°F However, these times may vary with environmental or climatic conditions

This material and its components are moisture sensitive. The product should be kept covered at all times after mixing and during application to prevent contamination and prevent moisture absorption.



Curing

Dry time @ 21°C / 70°F ambient air cure
Tack free: 4-6 Hours
Hard Cure: 24 hours
Full Cure: 3-5 days
Elevated Curing 40°C - 60°C / 105°F - 140°F for 40 minutes



Colors & Finishes

White, Clear and a full range of colors are available including metallic and pearlescent finishes.

High Gloss - > 90 / 60°
Semi-Gloss - 50-60 / 60°

Tint bases are available for distributors. Use Crea Nova 844 tint system. Do not use universal tints.

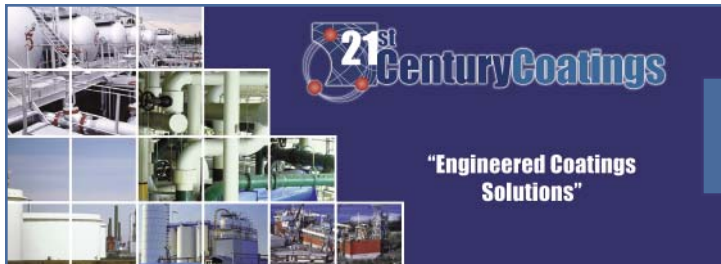


Surface Preparation

Suitable substrates for 51PC100™ include ferrous metal, galvanized metal, aluminum, fiberglass, carbon fiber, concrete and wood. Good surface preparation and cleaning of all substrates to be coated is essential for optimum performance of the coating system. All surfaces to be coated should be clean, dry and free from contaminants. For old or previously finished surfaces, the degree of preparation and cleaning required, is dependent upon the condition of the substrate.

21st Century Coatings (Canada) Ltd. manufactures a full range of epoxy and urethane priming systems and can provide a recommended primer to meet the requirements of your application.

Consult your 21st Century Coatings (Canada) Ltd. representative for recommended surface preparation procedures for your specific project.



51PC100™ High Performance Fluorinated Polyurethane

rev 01/05



Coverage

51PC100™ exhibits excellent opacity and coverage when spray applied. If applying colors by means other than spray, test opacity over a small section to ensure adequate coverage prior to general application.

Solids content (+/- 2%)	60% by volume - White 50% by volume - Clear
Number of Coats	2-3 coats at 50 microns / 2 mils DFT - White 2-3 coats only at 37.5 microns / 1 1/2 mils DFT - Clear
Coverage (theoretical)	19.66 m ² per litre @ 25 microns / 1 mil DFT - White 963 ft ² per gallon @ 25 microns / 1 mil DFT - White 16.39 m ² per litre @ 25 micron / 1 mil DFT - Clear 803 ft ² per gallon @ 25 microns / 1 mil DFT - Clear



Storage & Handling

Hazardous Goods:	Paint, Flammable Liquid, UN1263 Class III Hazchem 3YE
Shipping Information:	8.30 kg/18.25 lbs. per gallon unit including container - White 6.76 kg/14.9 lbs. per gallon unit including container - Clear
VOC content:	335 grams per liter / 2.8 lbs. per gallon - White 419 grams per liter / 3.5 lbs. per gallon - Clear
Flash Point (Seta Flash):	34°C / 93°F

Storage - FPU® coatings must be stored and handled in compliance with all current local regulations applying to flammable, or highly flammable liquids. Store in cool, dry, protected storage, well ventilated, between 5°C-35°C / 40°F-95°F and out of direct sunlight, moisture or rain. Maintain unmixed material in sealed containers at all times.

Shelf Life - FPU® has a minimum shelf life of 12 months from the date of manufacture if stored as indicated above, unopened in sealed containers. Ensure both components are consistent in appearance and thickness after stirring, and ensure that the activator (Part B) is clear and transparent before mixing the components together.

Do not use activator that is not visually clear.



Read each component's material safety data sheet before use. Mixed material has hazards of both components. Safety precautions must be strictly followed during storage, handling and use. Please read our health and safety data sheet.

LIMITATION OF REMEDIES:

21st Century Coatings (Canada) Ltd., makes no express warranty implied by law or otherwise with respect to this product and expressly disclaims liability for consequential or incidental damages. Buyer's sole remedy shall be refund or replacement of products purchased.