

LUMIFLON® Product Data Sheet

LUMIFLON LF-600X



LUMIFLON fluoropolymer resins were developed in 1982 as the first solvent-soluble fluoropolymers in the world. LUMIFLON polymers consist of alternating fluoroethylene and alkyl vinyl ether segments (FEVE). The fluorinated segments provide outstanding UV stability, weather resistance, and chemical resistance, while the vinyl ether segments provide solvent compatibility and cross-linking sites. LUMIFLON resins are used to make ultra-weatherable coatings for architectural, aerospace, automotive, and industrial maintenance markets.

LUMIFLON LF-600X is a moderate OH number resin. It is typically used to formulate coil coatings where flexibility and excellent weatherability are required. The major market where LF-600X finds application is the architectural market. However, LF-600X is also being used in ambient cure applications where high coating flexibility is required, for example, in coatings for plastics.

Product Characteristics

- Moderate OH functionality
- Excellent weatherability and water resistance, excellent chemical resistance
- Good adhesion to primers, fiberglass, plastics, and composites
- Wide range of gloss possible
- Curable at both ambient and elevated temperatures
- Suitable for shop and field applied coatings

Typical Physical Properties LUMIFLON LF-600X

Physical Property	Value
Appearance	Clear Liquid
Solids, wt. %	50%
OH Number, mg KOH/g-polymer	57
Specific Gravity, 25° C	1.08
Viscosity, Stokes	9

The data given in this product bulletin is for information purposes only. It is given in good faith and based on the best knowledge and experience of the company. This product should be used only in applications for which it was intended. This product is not designed for special applications such as pharmaceutical or other medical use. The company makes no warranties and undertakes no responsibilities regarding this product except as stated in contract documents for its supply.



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Standard Formulation for Single Component Coating with LUMIFLON LF-600X

Pigment Paste

Ingredient	Ingredient Function	Parts By Weight
LUMIFLON LF-600X	Resin	20.0
Ti-Pure 960 ¹	Pigment	30.0
Xylene	Solvent	50.0
Total		100.0

¹ DuPont

Let Down

Ingredient	Ingredient Function	Parts By Weight
Pigment Paste	Pigment	39.0
LUMIFLON LF-600X	Resin	46.2
Xylene	Solvent	2.7
Dibutyl Tin Dilaurate (DBTDL, 0.0001 in xylene)	Catalyst	1.8
Desmodur BL 3175 ²	Hardener	10.3
Total		100.0

² Bayer Corp.

Paint Formulation Properties

Property	Value
Solids Content, Wt. %	46.4
PVC, %	11.0
Specific Gravity, 25° C	1.12
Viscosity, Ford Cup #4, Seconds	46
VOC, g/l	597
VOC, lbs./gallon	5.0





Coating Properties of Fluorourethane

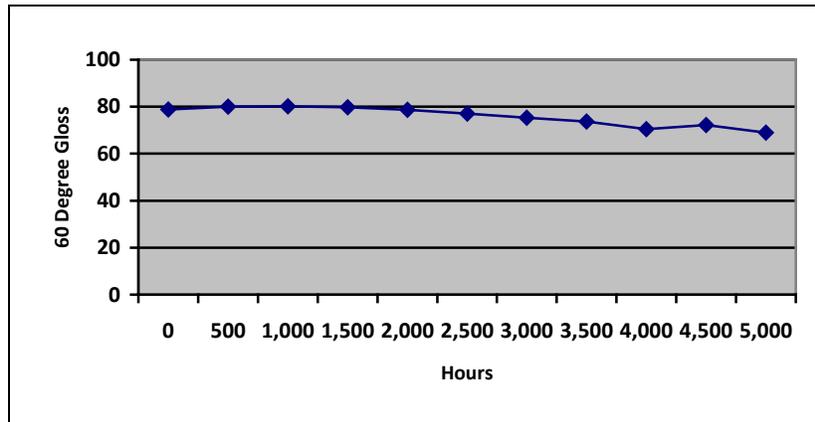
Cure Conditions: 50° C for 10 min., 160° C for 30 min.
 Substrate: Aluminum panels, 8 mm, acid chromated

Coating Properties of LF-600X Based Fluorourethane

Property	Test Method		Results
Gloss	ISO 2813	20°	51
		60°	78
Pencil Hardness	ASTM D3363	Gouge	4H
Flexibility	ASTM D 4145	Mandrel bend	2T (Paint fracture)
Flexibility	ISO 1520	Cupping test	>7mm (cracking)
Impact Resistance	ASTM D 2794 (Diameter=0.5")	Intrusion 0.5 kg	>0.5 m
		Extrusion 0.5 kg	>0.5 m
Cross Cut Adhesion	ASTM D 3359		5B
Water Resistance	ISO 2812 40° C, 24 hrs. 1. Cross Cut Adhesion, ASTM D 3359 2. Blistering, ASTM D 714 ISO 4628		5B/5B (Wet/dry)
			No Blistering No Blistering



Accelerated Weathering of LUMIFLON LF-600X: QUV-B Test



UV / Condensation Cabinet Cycle:
8 hours UV at 70° C and 4 hours Condensation at 50° C

