LUMIFLON® LF-810 Resin
Product Data Sheet

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-810

LUMIFLON LF-810 is a high molecular weight, low OH number fluoropolymer resin. It is meant to be formulated without crosslinkers, yielding coatings with extremely high weatherability and corrosion resistance. Potential applications for coatings made with LF-810 include architectural, industrial maintenance, and bridge coatings.

Typical Physical Properties
LUMIFLON LF-810

Physical Property	Value
Appearance	Clear Liquid
Gardener Color	< 2
Solids, wt. %	45%
OH Number, mg KOH/g-polymer	4
Acid Value, mg KOH/g-polymer	0.3
Specific Gravity, 25° C	0.98
Viscosity, Stokes	18

Starting Formulation for Single Component Coating with LUMIFLON LF-810

Pigment Paste	Ingredient	Parts By Weight
Resin	LUMIFLON LF-810	22.2
Pigment	TiO_2, R-960[1]	40.0
Solvent	Mineral Spirits	37.8
Total		100.0
Paint Formulation	**Ingredient**	
Pigment Paste	Described Above	35.0
Resin	LUMIFLON LF-810	65.0
Total		100.0

[1] DuPont

Properties of LF-810 Coating

Cure Conditions: 1 week, 23° C
Substrate: Aluminum panels, 8 mm, acid chromated

Properties

Property	Test Method		Results
Pencil Hardness	ASTM D3363	Gouge	HB
Flexibility	ASTM D 4145	Mandrel bend	0T (Paint fracture)
Flexibility	ISO 1520	Cupping test	6mm (cracking)
Impact Resistance	ASTM D 2794 (Diameter=0.5”)	Intrusion 0.5 kg Extrusion 0.5 kg	>1.0 m 0.5 m
Cross Cut Adhesion	ASTM D 3359		5B

Accelerated Weathering of LF-810 Coating: Xenon Arc Weatherometer