



LUMIFLON® Advance Technical Data Sheet

LUMIFLON LF552E

LUMIFLON® fluoropolymer resins were developed by Asahi Glass in 1982 as the first solvent-soluble fluoropolymers for coatings. LUMIFLON's polymer structure consists of regularly alternating fluoroethylene (FE) and vinyl ether (VE) units. The fluorinated segments provide excellent UV stability, weather and chemical resistance, while the vinyl ether segments provide solvent solubility and crosslinking sites. LUMIFLON resins are used to make ultra-weatherable coatings for architectural, industrial maintenance, alternative energy, automotive, and aerospace markets. LUMIFLON LF552E is low naphthalene grade product.

Typical Physical Properties

Physical Property	Unit	LUMIFLON LF552E
Appearance	-	Clear Liquid
Solids, Wt. %	wt%	40
Specific Gravity	(25° C)	1.05
Viscosity, Stokes	(10 ⁻⁴ m ² /s)	3.7
Hydroxyl Number	mgKOH/g polymer	52
Acid Number	mgKOH/g polymer	5

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.

Standard Formulation for 1K Coating

Baking Condition: PMT* 200 deg. C for 1min. (Oven 215 deg. C) *PMT: Peak Metal Temperature

Substrate: Aluminum Panels (A5052P, 8mm), prepared by Acid-chromating

***Use Cactus fine in LF552E as solvent a**

1. White Formulation

[Pigment Paste]

Ingredient	Ingredient Function	Parts By Weight
LUMIFLON LF552E	Resin	25.0
Super Durable TiO ₂ Dioxide D-918 ¹	Pigment	40.0
Cactus Fine SF-01 ²	Solvent a	28.0
Cyclohexanone	Solvent b	7.0
Total		100.0

¹ Sakai Chemical Industry Co., LTD ² JX Nippon Oil & Energy Corporation

[Mill Base]

Ingredient	Ingredient Function	Parts By Weight
Pigment Paste	Above Described	38.20
LUMIFLON LF552E	Resin	57.95
Cactus Fine SF-01 ²	Solvent a	1.12
Cyclohexanone	Solvent b	0.28
Dibutyl Tin Dilaurate (DBTDL, 0.0001 in Cactus Fine SF-01 ²)	Catalyst	2.45
Total		100.00

[Mill Base/ Hardener]

Ingredient	Ingredient Function	Parts By Weight
Main Pack	Above Described	100
Desmodur BL 3175 ³	Crosslinker	9.65

³Bayer Co. LTD

2. Clear Formulation

Ingredient	Ingredient Function	Parts By Weight
LUMIFLON LF552E	Resin	69.70
Cactus Fine SF-01 ²	Solvent a	14.85
Cyclohexanone	Solvent b	3.71
Dibutyl Tin Dilaurate (DBTDL, 0.0001 in Cactus Fine SF-01 ²)	Catalyst	1.90
Desmodur BL 3175 ³	Crosslinker	9.86
Total		100.00

Coating Properties

These coating properties are the panels' from "1. White Formulation" above described.

Property		Test Method	Unit	Results: LF552E
Dry Film Thickness		ISO 2808	μm	52.3
Gloss	60° 20°	ISO 2813		88.5 72.9
Pencil Hardness	Scratch	ASTM D3363		2B
	Gouge			3H
Flexibility	Mandrel bend	ASTM D 4145		1T
Flexibility	Cupping test	ASTM D 4145	mm	6.0
Impact Resistance	Front (Diameter=0.5")	ASTM D 2794	m	1.0
Cross Cut Adhesion		ASTM D 3359		5B
Water Resistance		ISO 2812		No changing
	Cross Cut Adhesion	ASTM D 3359		5B
	Blistering	ASTM D 714		No blister
Chemical Resistance				
	NaOHaq. (5wt%)			No blister
	H ₂ SO ₄ aq. (5wt%)			No blister
	HNO ₃ aq. (5wt%)			Blister