

LUMIFLON® Product Data Sheet

LUMIFLON Solid Resins



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.

In order to enable formulators to meet VOC and HAPS regulations, AGC Chemicals has developed two new LUMIFLON products in flake form: LUMIFLON LF-200F and LUMIFLON LF-916F. These resins can be dissolved in VOC and HAPS exempt solvents such as acetone, Oxsol® 100, t-butyl acetate, and dimethyl carbonate to meet the strictest air quality requirements.

LUMIFLON LF-200F is a moderate molecular weight, moderate hydroxyl number resin. LF-916F is lower in molecular weight, and can be used to formulate coatings with higher crosslink density. Typical physical properties of each resin are given in the table below.

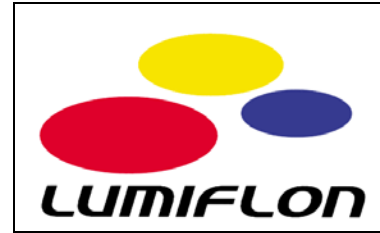
Applications for LUMIFLON flake resins include automotive and aerospace coatings, architectural coatings, coatings for plastics, aluminum, and steel, and industrial maintenance coatings.

Typical Physical Properties LUMIFLON Solid Resins

Product	LF-200F	LF-916F
Physical Property		
Appearance	Pale yellow flake	Pale yellow flake
Non-Volatiles, wt. %	>98	99
Hydroxyl Number, mg KOH/g resin	49	100
Glass Transition Temperature, ° C	35	34
Density, g/cc, 25° C	1.42	1.39

The information given in this Product Data Sheet 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.





Solubility Data for LUMIFLON LF-200F and LF-916F (ASTM D4287)

The viscosity of LUMIFLON LF-200F and LF-916F in a range of solvents was determined. The viscosity results should be compared to those of the resins in xylene, which is the standard solvent for LUMIFLON resins. By the appropriate choice of solvents, coatings that meet even the most stringent air quality regulations can be formulated with LF-200F and LF-916F.

LUMIFLON LF-200F			LUMIFLON LF-916F		
Solvent	Solids, Wt. %	Brookfield Viscosity, cps	Solvent	Solids, Wt. %	Brookfield Viscosity, cps
Xylene	49.5	630	Xylene	50.1	202
	61.9	6,284		64.8	1,709
	70.6	>20,000		-	-
t-Butyl Acetate	50.2	869	t-Butyl Acetate	42.9	869
	75.2	29,256		64.3	2,074
Oxsol 100	48.6	6,632	Oxsol 100	50.5	1,748
	55.6	25,000		61.2	12,425
Acetone	50.0	250	Acetone	50.0	22
	60.0	975		65.0	240
Dimethyl Carbonate	50.0	825	Dimethyl Carbonate	60.0	375
Methyl Ethyl Ketone (MEK)	50.8	263	MEK	52.0	44
	68.1	4,714		70.6	922
Methyl Amyl Ketone (MAK)	50.5	470	MAK	63.3	579
	66.9	6,876		71.9	3,808
Methyl Acetate	51.8	333	Methyl Acetate	59.9	157
	61.6	1,645		66.7	565
	66.3	4,186		70.6	1,200
n-Butyl Acetate	49.9	496	n-Butyl Acetate	49.9	96
	59.2	2,397		62.5	613
PM Acetate	50.9	1,573	PM Acetate	49.5	192
	64.2	20,747		61.1	1,151
Ethyl 3-Ethoxy Propionate (EEP)	50.7	1,941	EEP	48.6	160
	64.0	16,729		70.8	11,000

