



LUMIFLON FD1000

FEVE Waterborne Resin Polyol

PRODUCT DESCRIPTION

LUMIFLON® FD1000 is a fluoroethylene vinyl ether waterborne resin used in applications requiring outstanding exterior durability. It is a polyol used in 2K polyurethane coatings and may be used as a blending resin in 1K systems. It has a low molecular weight combined with a high hydroxyl value for creating 2K waterbased polyurethane coatings with a high crosslink density. This waterborne polyol is classified as a dispersion as it is synthesized without emulsifier. This unique, emulsifier-free technology allows for the formulation of waterbased 2K polyurethane coatings with the same performance as traditional solventbased 2K coatings. Markets include heavy duty industrial coatings, architectural coatings, aerospace coatings, automotive coatings, and coatings for concrete.

CHARACTERISTICS

- Outstanding weatherability
- Cures under ambient conditions for field applications or with heat in factory settings
- Applications include heavy duty industrial, architectural, concrete, and direct-to-metal coatings

TYPICAL PROPERTIES

Property	FD1000	Property	FD1000
Appearance	Translucent, white liquid	Specific Gravity, 25°C	1.13
Weight Solids, %	40	OH value, mg KOH/g polymer	85
pH	7-9	OH Eq. Wt. on solids/as supplied	660/1650
Ionic Character	Anionic	Acid Value mg KOH/g polymer	15
Particle Size, nm	50-100	Minimum Film Forming T, °C	29

LUMIFLON® is a registered trademark of Asahi Glass Company, LTD.

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.

STARTING POINT FORMULATIONS

2K Clear Coating with LUMIFLON FD1000

Part A: Add all ingredients under agitation

Trade Name	Type	Parts by Weight
LUMIFLON FD1000	FEVE Dispersion	95.0
Surfynol® 465 (Air Products)	Surfactant	1.8
Byk® 346 (Byk)	Flow Agent	2.2
Optiflo® H 3300 VF (Byk) (44% dilution in water/Dowanol™ DPnP (Dow))	Thickener	1.0
Total		100.0

Part B: Add all ingredients under agitation

Trade Name	Type	Parts by Weight
Part A		100.0
Bayhydur® 302 (Covestro)	Poly-isocyanate	14.7
Total		114.7

Property	Result
Solids Content, wt%	48.4
Specific Gravity	1.13
NCO/OH Index	1.05
VOC, g/L	30.0
20/60 Gloss	73/85



AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341

Phone: 610.423.4300

Fax: 610.423.4301

<http://www.agcchem.com>

STARTING POINT FORMULATIONS

2K White Coating with LUMIFLON FD1000

Pigment Paste: *Grind to Hegman 7+*

Trade Name	Type	Parts by Weight
D.I. Water	Diluent	21.9
Disperbyk® 2012 (Byk)	Dispersant	6.7
Byk® 024 (Byk)	Defoamer	1.0
Surfynol® DF75 (Air Products)	Defoamer	1.0
Ti-Pure™ R960 (Chemours) or Tipaque PFC105 (Ishihara)	TiO ₂ Pigment	68.8
Optiflo® H 3300 VF (Byk)	Thickener	0.6
Total		100.0

Part A: *Add all ingredients under agitation*

Trade Name	Type	Parts by Weight
LUMIFLON FD1000	FEVE Dispersion	72.5
Surfynol® 465 (Air Products)	Surfactant	1.7
Byk® 1785 (Byk)	Defoamer	0.3
Optiflo® H 3300 VF (Byk) (44% dilution in water/Dowanol™ DPnP (Dow))	Thickener	1.3
White Dispersion	Pigment Paste	22.6
NaNO ₂ (15% solution)	Flash Rust Inhibitor	1.6
Total		100.0

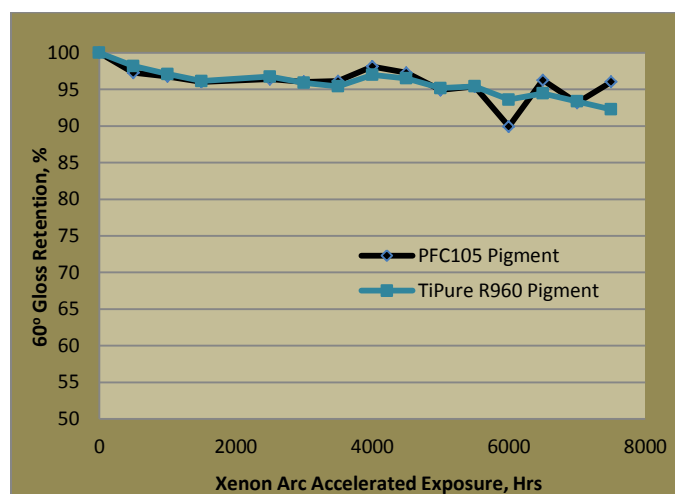
Part B: *Add all ingredients under agitation*

Trade Name	Type	Parts by Weight
Part A		100
Bayhydur® 302 (Covestro)	Poly-isocyanate	11.2
Total		111.2

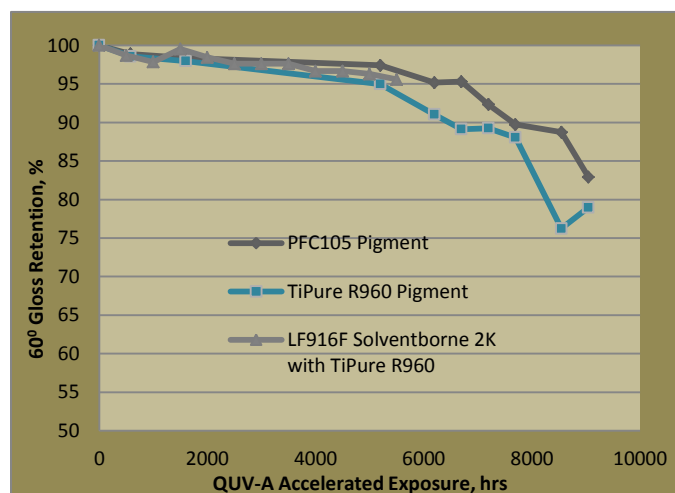
Property	Result
Solids Content, wt%	53.0
Volume Solids, %	38.9
Specific Gravity	1.24
NCO/OH Index	1.05
VOC, g/L	<5
20/60 Gloss	58/82

WEATHERING DATA

Xenon Arc Accelerated Weathering of a 2K White Formulation based on FD1000



QUV-A Accelerated Weathering of a 2K White Formulation based on FD1000





LUMIFLON FD1000

FEVE Waterborne Resin Polyol

STORAGE AND HANDLING

Keep away from sunlight and rain. Floor surface of storage place should be made of non-permeable materials to the ground such as concrete. Store in a cool, dry, well-ventilated location. Protect from freezing.

Wear appropriate safety glasses and gloves to avoid contact with eyes and skins. Hands should be washed thoroughly after handling. Suitable ventilation should be used during application.

PACKAGING

18kg pail
200kg drum

For more information and samples contact

AGC Chemicals Americas, Inc.

55 E. Uwchlan Avenue, Suite 201

Exton, PA 19341

Phone: (610) 423-4300 | Fax: (610) 423-4301

info@lumiflonusa.com

www.lumiflonusa.com

Lumiflon® is a registered trademark of Asahi Glass Company, Ltd.

Lumiflon FD1000 Product Information.DOC 01/2014

LUMIFLON® is a registered trademark of Asahi Glass Company, LTD.

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.

The logo for AGC Chemicals Americas, Inc. features the letters 'AGC' in a large, bold, blue sans-serif font.

AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341

Phone: 610.423.4300

Fax: 610.423.4301

<http://www.agcchem.com>