

ZEFFLE GK-571

Next Generation Fluorourethane - Coil Coating

Fluoropolymer, Weather,
Chemical/ Solvent, and Stain
Resistant Coating

Characteristics

Solvent borne copolymer of
tetrafluoroethylene and vinyl
monomer

Slower solvent package to increase
tailing and improve processability

Chlorine free

Excellent weather resistance with
decades of performance

Anti-corrosion, chemical resistance,
and staining reduction / elimination

Various gloss and colors can be
obtained

Curing from room temperature to
230°C

Cured with polyisocyanate or
melamine-type crosslinking agents

Applications can be performed by
various methods, including spraying,
brushing, roller painting and in roll to
roll processes

Low vapor permeability

Main ZEFFLE Applications:

Architectural Panels

Industrial Paints

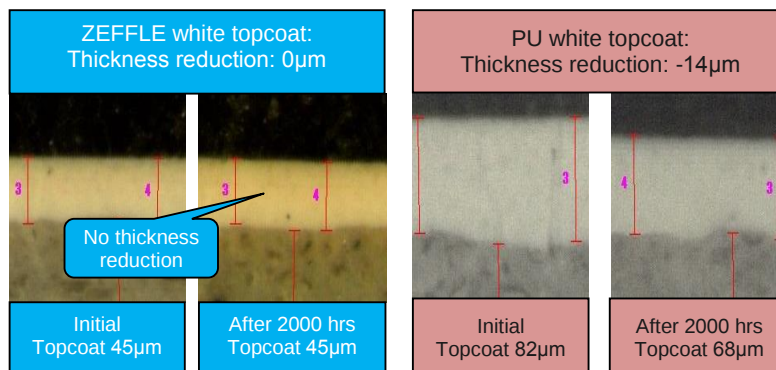
Chemical Resistant Topcoat

UV Durable Applications

Weathering Data:

2000 hrs by QUV (U-VB313):

Corresponding approx. 5-7 year natural exposure



Property		Value
Formulation Properties		
White pigmented film on surface treated Al Panel		
Pencil Hardness (ASTM D3363)		H
60° Gloss (ASTM 523)		82
Adhesion (1mm Crosscut 25/25)		Pass
Flexibility (180° Bend)	@ 25°C	φ 2 mm OK
	@ -20°C	φ 3 mm OK
Solvent resistance (Butyl Acetate 100 cycles)		No change
Water Resistance (7 days immersion)	Appearance	No Change
	Adhesion	Pass
Chemical Resistance (7 days immersion)	5% H ₂ SO ₄	No Change
	5% NaOH	No Change
Xylene Marker Removability Test (ΔE) After 1 day wiped with Ethanol	Black	0
	Blue	0
	Red	6
Resin Properties		
Resin Viscosity (25°C; 10 sec ⁻¹)		< 1000 cps
Molecular Weight		Moderate
Resin Solids (wt%)		50%
Tg (°C)		25-28
OH Value (mg KOH/g polymer)		55-65
Acid Value (mg KOH/g polymer)		< 5
Solvent Blend		n-butyl acetate/ Solvesso 100

Coil Coating ZEFFLE Starting Point Formulation:

Mill Base:

Ingredient	Function	Parts per hundred
GK-571	Resin	26.1
Ti-Pure R-706 ¹	Pigment	26.3
n-butyl acetate	Solvent	10.5
Total		63.1

¹Chemours

Let Down:

Ingredient	Function	Parts per hundred
Mill-base		63.1
GK-571	Resin	36.9
Total		100.0

Paint Formulation:

Ingredient	Function	Parts per hundred
Let Down		100
Desmodur N3300A ² (50% in t-butyl acetate)	Crosslinker	6.8
Total		106.8

²Covestro

Recommended Curing:

ZEFFLE GK-571 paint can be cured under different conditions.

Examples:

- 7 days at room temperature
- 1 hour at 80°C
- 2 minutes at 230°C

	Test Conditions	ZEFFLE	Current Acrylic Silicone	Current Acrylic Urethane
8% Buffered HF	1 hr @ RT	A	B	C
50% HF	1 hr @ RT	A	C	C
60% Sulfuric Acid	24 hr @ RT	A	A	A
	2 hr @ 60°C	A	A to B	B
50% Nitric Acid	2 hr @ RT	A to B	C	C
35% HCl	2 hr @ RT	A	A	A
50% Acetic Acid	2 hr @ RT	A	A to B	A to B
10% NaOH	14 days @ RT	A	A to B	A to B
10% H ₂ O ₂	14 days @ RT	A to B	B	C
Butyl Acetate	24 hr @ RT	A	A to B	A to B
MEK	24 hr @ RT	A	A to B	A to B
Chloroform	24 hr @ RT	A	A to B	B
Petroleum Benzene	24 hr @ RT	A	A to B	B

Notes: A (Excellent), B (Fair), C (Poor)

For more information please contact Daikin America, Inc.

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Or visit www.daikin-america.com/surfacetechologies.