

ZEFFLE GK-870

Next Generation Fluorourethane

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

Characteristics

Solventborne copolymer of
tetrafluoroethylene and vinyl
monomer

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
150°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

Common ZEFFLE Applications:

Photovoltaic Backsheets

Industrial Paints

Protective Films

Overlaminates

Signage

Automotive

Window

Electronics Coatings

Chemical Resistant Topcoat

Real World Performance:

ZEFFLE GK-870 (TFE Based)

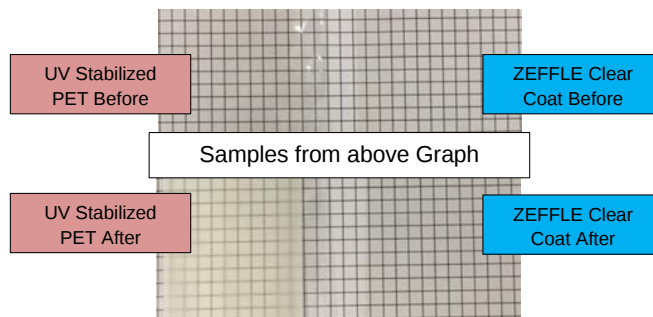
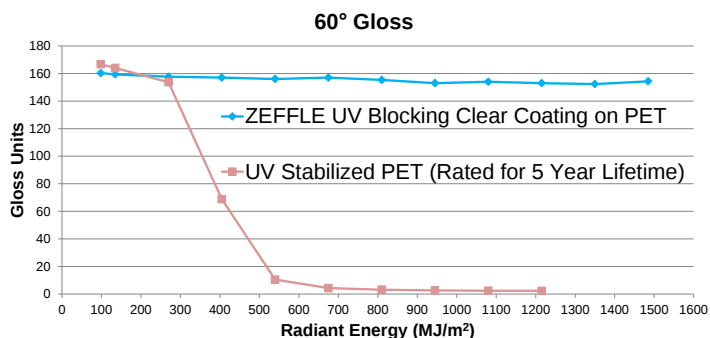


Competitor FEVE (CTFE Based)



Corrosion test (clear coat on Stainless Steel without primer):
4 years real world outdoor exposure in semi-tropical marine environment
(Miyakojima Island in Okinawa, JP)

Xenon Arc Weathering of ZEFFLE Clear Coat on PET



Property	Value
Resin Viscosity (25°C; 10 sec ⁻¹)	550-1300 cps
Molecular Weight	Moderate
Resin Solids (wt%)	65%
Tg (°C)	25-28
OH Value (mg KOH/g polymer)	61-65
Acid Value (mg KOH/g polymer)	< 5
Solvent Blend	n-butyl acetate
VOC (Calculated via EPA Method 24)	396 g/L

Recommended Curing:

For Films

120 °C for 5-6 minutes film temperature OR

150 °C for 2 minutes film temperature

Cool to 40 °C before rolling

Allow extended curing at 40 to 60 °C for 2-3 days

For Paints

Ambient cure for ~72 hours or use catalyst or elevated curing temperatures.



Nagano Olympic Stadium with ZEFFLE Topcoat:
Completed in 1996

Comparison Chart

(Immersion Testing)

	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)

UV Protection of PET

Xenon Arc Testing

1500 hrs
Modified ASTM G-155
Cycle 1 from 0.35 to 1.5 W/m²

White Outer Layer	20° Gloss Retention
ZEFFLE	95%
PVdF	71%
PVF	9%
UV Stabilized PET	4%

For more information please contact Daikin America, Inc.

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