

COIL COAT





All you need is imagination and creativity

Metal is increasingly being used as the main decorative material in buildings due to its durability, design versatility and aesthetic properties. Now you no longer have to worry about metal's inherent defects such as corrosion resistance, resistance to chalking, colour homogeneity and surface imperfections, because Coil Coat resin-based fluorocarbon coatings can help you achieve a functional and decorative metal finish.

The fluorocarbon coating gives the building a bright and attractive appearance and provides long-lasting protection.

Coil Coat fluorocarbon coatings are used on countless commercial, industrial and residential buildings around the world to protect them from weather, aging, atmospheric pollution, etc. First commercialized in 1965, fluoropolymer resins have been successfully used for more than 40 years, proving that fluorocarbon coatings are the best choice for corrosion protection on metal substrates such as aluminium profiles, aluminium sheets, steel plates, etc. . No other coating system can resist the fading and discolouration caused by outdoor ageing as long as such coating system, so that the building retains its original bright colour. This high performance fluorocarbon coating has been the coating of choice for designers seeking high quality architectural designs and for environmentalists seeking to save energy and protect the environment.

Suitable applications for Coil Coat fluorocarbon coatings

Unparalleled outdoor weather resistance of Coil Coat coatings

Florida outdoor exposure tests

The following swatches with different coatings were exposed to the sun at the South Florida Exposure Test Site and clearly show that Coil Coat resin-based fluorocarbon coatings are more resistant to weathering than other coatings.

Ten Years Exposure

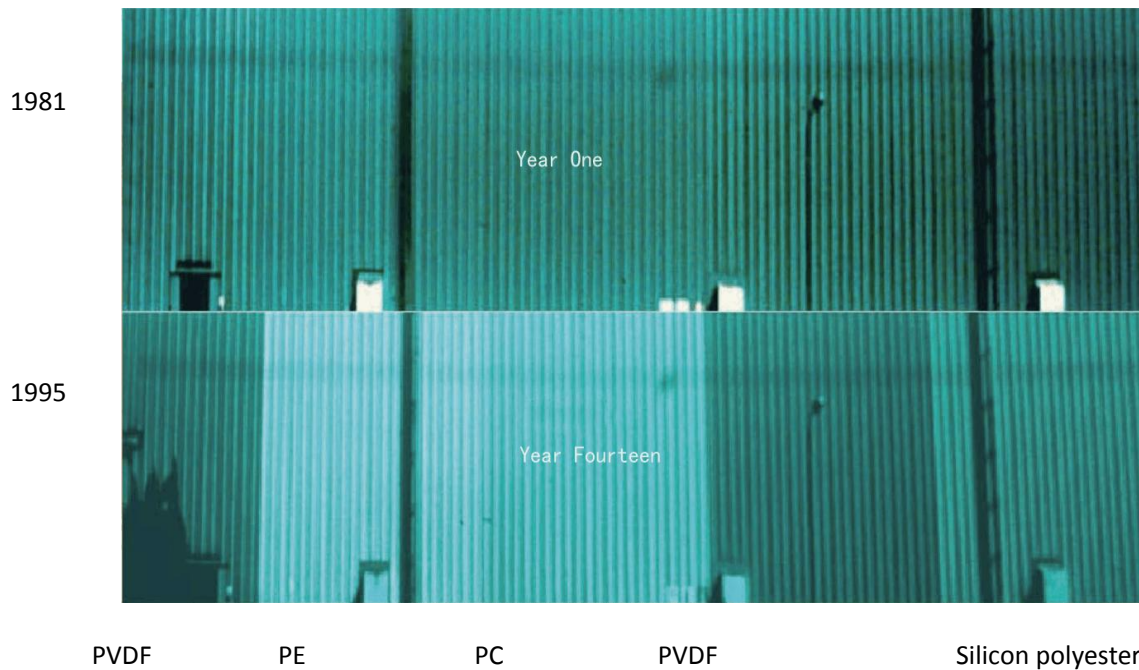
Fifteen Years Exposure

Seventeen Years Exposure



Test wall at Taiyo Steel Works, Japan 1981-1995

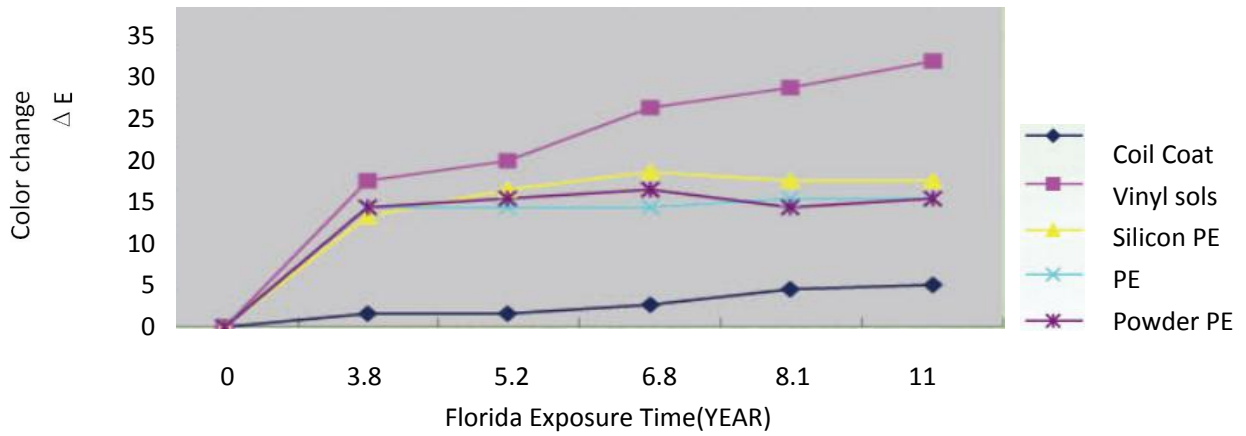
In 1981, Taiyo Steel in Funabashi, Japan, installed various coated steel sheets on the south facade of a new factory it was building to test the weather resistance of the various coloured metal coatings used at the plant. Fourteen years later, the fluorocarbon coating is the only one that retains its original colour appearance.



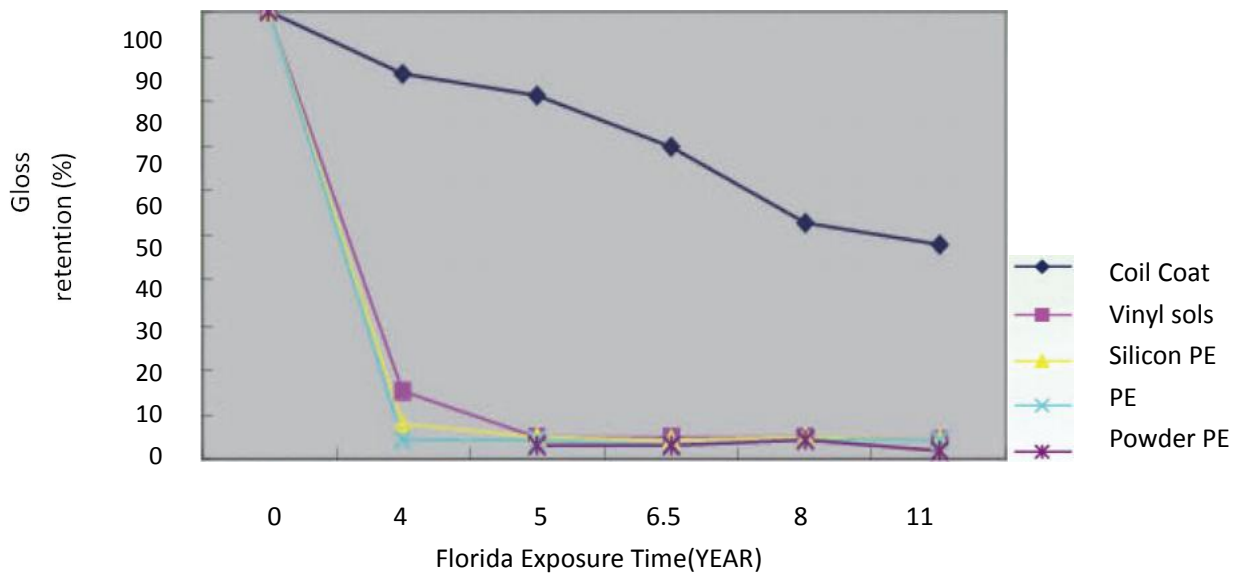
PVDF coatings offer better performance and longer life

The results of building applications around the world prove that fluorocarbon coatings show excellent outdoor weather resistance and excellent resistance to ageing. Fluorocarbon coatings provide long-term protection against damage caused by rain, moisture, high temperatures, ultraviolet light, oxygen, atmospheric pollutants, climate change and so on.

Colour retention of Coil Coat PVDF coatings compared to other polymer coatings



Comparison of the light retention properties of Coil Coat PVDF coatings with other polymer coatings



Comparison of PVDF and FEVE resin-based coatings

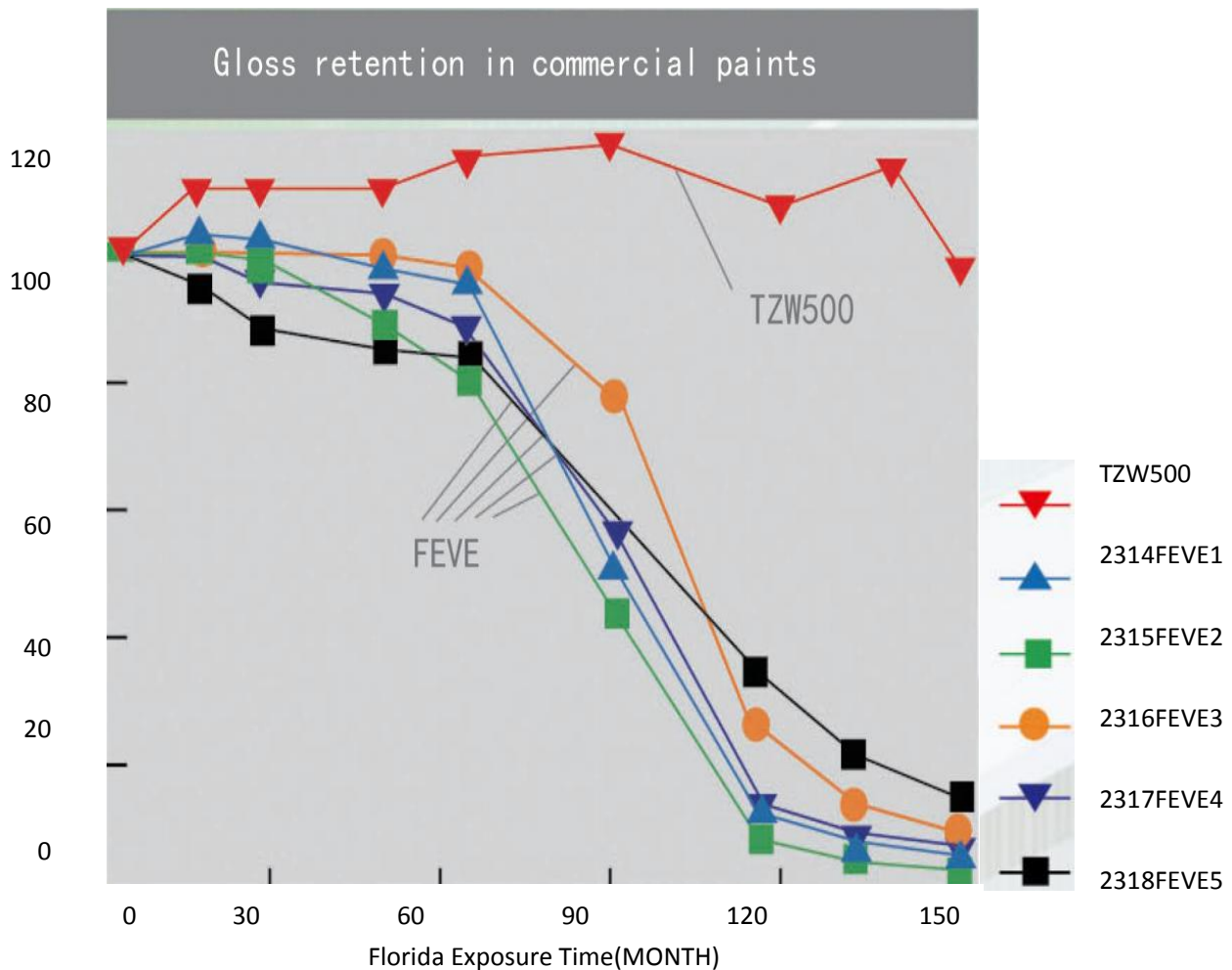
It is well known that fluorocarbon bonds are fundamental to the weathering performance of fluorocarbon coatings, as they are one of the strongest chemical bonds in nature, and the higher the fluorine content of a fluorocarbon coating, the better the weatherability and durability of the coating. The following chart compares the fluorine content of Coil Coat paint and FEVE resin-based coatings.

Comparison of the fluorine content of Coil Coat paint and FEVE resin-based coatings

Fluoropolymer/formulation resin ratio	Fluorine content weight ratio	
	Coil Coat	FEVE
100/0	59	26
90/10	53	24
80/20	48	21
70/30	42	18

The data in the table show typical formulations of Coil Coat paint and FEVE resin-based coatings. It can be seen that the fluorine content of Coil Coat resin-based coatings is higher than that of FEVE-based coatings, resulting in Coil Coat having better light and colour retention. Florida weathering tests have also demonstrated that Coil Coat fluorocarbon coatings are far more resistant to weathering than other FEVE resin-based coatings.

Comparison of the gloss retention properties of TZW500 and FEVE resin-based coatings



(TZW500 is one brand of Coil Coat paint)

Coil Coat coating specification profile

Coil Coat coating meets the requirements of the AMMA 2605 standard for high-performance coatings for construction. The following are the main technical specifications of the AMMA 2605 standard.

Performance tests	AAMA 2605
Coating thickness	30 microns
Adhesion (cross-hatch method)	100% non-peeling under dry, wet and boiling conditions
Impact strength	No peeling under at least 3±0.3mm deformation
Hydrochloric acid resistance (10%)	No bubbles or colour change after 15 minutes of testing and washing
Resistance to mortar	24 hours surface contact, no adhesion or residual mortar
Resistant to cleaning agents	72 hours immersion, no change or reduction in film adhesion
Resistance to moisture	4000 hours at 100% humidity, bubble size #8 max
Salt water corrosion resistance	4000 hours, 5% salt solution, minimum #7 at the cut, minimum #8 on the rest of the sample
Metal pretreatment requirements	Chrome plating: 431 mg/m ² (40 mg/ft ²), chrome free finish: as recommended by supplier
Pencil hardness	≥F
Drop abrasion test (l/mil)	≥40
Nitric acid resistance Colour change	Δ E ≤ 5 when placed on fuming nitric acid for 30 minutes
Resistance to glass cleaners	Test for 24 hours, no change to the naked eye after cleaning
Weather resistance	Florida 10 years outdoor exposure colour change: ≤5
	Gloss retention: ≥ 50% Chalking: ≥ 8 (white sample ≥ 6) Film erosion: ≤ 10%

The new generation of green Coil Coat paint

Coil Coat coatings that is now fully commercialised and is a PVDF fluorocarbon coating that is greener and more environmentally friendly.



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