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FEVE Coated Aluminum Coil

FEVE (Fluoroethylene Vinyl Ether) coated aluminum coils are aluminum products that have been coated with a special fluoropolymer-based paint system. FEVE coatings are known for their excellent durability, weather resistance, and aesthetic qualities, making them a popular choice in architectural and industrial applications.

FEVE coated aluminum coils offer a combination of aesthetic appeal and functional performance, making them a popular choice in construction and manufacturing.

Specification of FEVE Coated Aluminum Sheet:

Alloy	AA1050, 1060, 1070, 1100, 3003, 3004, 3105, 5005, 5052, 6061, 8011, etc
Coil thickness	0.018-1.5mm
Coil width	30-2000mm, Standard 1240mm, MAX 2020mm
Coil weight	0.5 to 5.0 tons per coil
Surface treatment	PE/PVDF coated, Embossed, Mill finish, Mirror Finish, Powder coated, Wood grain, Stone grain, Checkered
color	white series, metallic series, dark series, gold series(accept color customs), RAL/PANTONE color chart or customized
Packing	Standard exporting packing/ or at buyer's requirement
Trade Terms	FOB/CIF etc
Diameter	405mm, 505mm, 508mm
Coating thickness	14-28 microns（PE:≥14micron, PVDF:≥25micron）
Coils core diameter	150mm,405mm,505mm
Temper	O - H112
gloss	20-100%(matte:≥20，glossy：≥60）

Standards and Specifications

ASTM	B209
ISO	ISO 26204 (alloy designations), ISO 6892 (mechanical testing),ISO 9001,ISO 14001.
UNS	A91050 (United States Numbering System)

Performance of FEVE Color Coated Aluminum Coil

Test Item	National standard	Test Result
Color Difference	ΔE≤2.0	ΔE≤1.0
Gloss Difference	≤10	≤5
Coating Thickness	Two layers Min 23μm	≥25μm
	Three layers Min 30μm	≥34μm
Pencil Hardness	≥HB	HB
T-bend	≤2T	≤2T
Adhesion	Grade 0	Grade 0
Impact	≥50kg.cm	≥50kg.cm
Boiling water Resistance	2h No change	4h No change
Solvent Resistance	200 times paints remaining	500 times no break
Acidity Resistance	5%HCL 24hrs No change	No change
Alkali Resistance	5%NaOH 24hrs No change color △E≤2.0	No change
Nitric acid Resistance	△E≤5.0	△E≤5.0
Oil Resistance	20#oil 24hrs No change	No change
Salt Spray Resistance	4000hrs ≤Grade 1	No change
Abrasion resistance	≥5L/μm	≥5L/μm
Dirt Resistance	≤5%	＜5%
Color retaining	4000 hrs△E≤4.0	4000 hrs △E≤3.0
Gloss weaken Level	4000 hrs ≤ Grade 2	4000 hrs ≤ Grade 2
Chalking	4000 hrs No change	4000 hrs No c

Warranty：
PVDF: 15 years；
FEVE: Two coats: between 10-15 years；
FEVE: Three coats: 15-20 years.

Comparison of FEVE coating, PVDF coating and PE coating

Performance Indicators	FEVE Fluorocarbon Coating	PVDF fluorocarbon coating	PE Polyester coating
Excellent weather resistance	More than 20 years	More than 20 years	5-8 years
High gloss	80 degrees or more	Below 40 degrees	85 degrees or above
High hardness of coating	2H	F	2H

Anti-graffiti effect	Excellent	none	generally
Chemical resistance	Qualified, alkali resistance is better than PVDF	Qualified, alkali resistance is not as good as FEVE	Can't pass
Color Variety	Excellent	Bright colors cannot be achieved	Excellent

Color Options of FEVE Coated Aluminium Sheet:

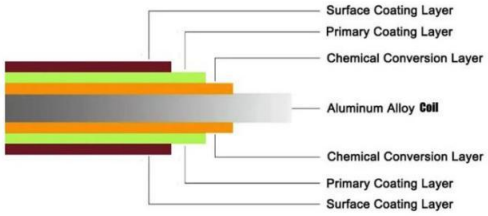
FEVE coated aluminum coils can be processed into a variety of different colors and textures such as metallic color, wood grain color, marble color, etc. by special surface treatment technology to meet different architectural styles and decoration requirements.

Standard Color
The standard color of FEVE coated aluminum coils is modulated according to the Ral color card. The basic colors are red, yellow, blue, green, white, gray and other colors and their derivative colors, which are suitable for most conventional applications.

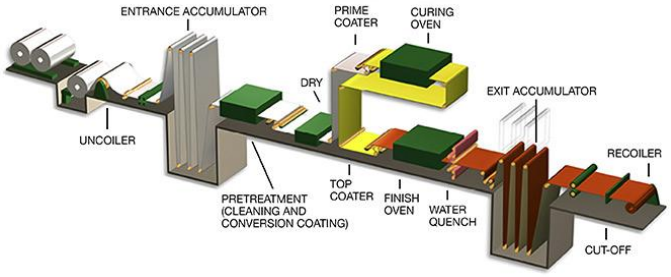
Metallic Colors
The Metallic color of FEVE color coated aluminum coils simulate metal textures, such as silver gray, bronze, rose gold, etc., which add a sense of luxury and class to the product and are often used in high-end architectural decoration.

Printing Series
The printing series achieve natural texture effects such as wood grain and stone grain through special coating technology, providing more diversified choices for architectural design, esuitable for places that pursue natural and environmental protection concepts.

Structure of FEVE Coated Aluminum Coil



Process of Coil Coating



Advantages of FEVE Color Coated Aluminum Coil:

Durability:
FEVE coatings are highly resistant to UV radiation, chemical exposure, and environmental degradation. This makes them suitable for use in harsh environments.
Color Retention:
The coatings maintain their color and gloss over time, even when exposed to intense sunlight and weather conditions. This helps in preserving the aesthetic appeal of the coated surface.
Weather Resistance:
FEVE coatings provide excellent resistance to moisture, dirt, and pollution. They are less likely to fade or chalk compared to other types of coatings.
Flexibility:
FEVE coatings can be applied to a variety of substrates, including aluminum, and can be formulated to achieve different finishes (glossy, matte, etc.).
Low Maintenance:
The smooth surface of FEVE coatings makes them easy to clean, reducing maintenance requirements over time.

Applications of FEVE Coated Aluminum Sheet:

FEVE coated aluminum coils are used in a variety of applications, including:
Architectural Cladding:
Ideal for building facades, balconies, and other architectural features where both aesthetics and durability are important.
Roofing Materials:
Used for roofing sheets and panels due to their resistance to weathering and UV exposure.
Signage:
Suitable for outdoor signage where color retention and durability are critical.
Industrial Applications:
Used in environments where chemical exposure and corrosion resistance are necessary.
Transportation:
Sometimes used in the automotive and aerospace industries for parts that require a durable and weather-resistant finish.