

# Yieh Phui PVC

**Yieh Phui**  
Embossed PVC Plastisol  
Pre-Painted Steel Sheet in Coil



**ColorEmboss EV-200**

**ColorEmboss EV-200F**

**ColorEmboss EV-200L**

# Yieh Phui

## Embossed PVC Plastisol Pre-Painted Steel Sheets

### DESCRIPTION

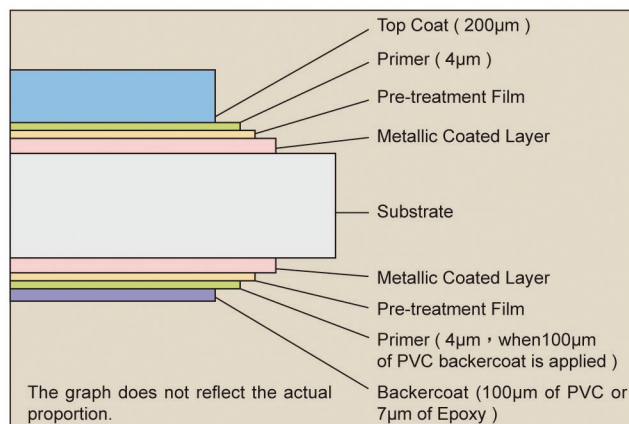
The high build film of ColorEmboss **EV-200**, ColorEmboss **EV-200F** and ColorEmboss **EV-200L** adopts PVC Plastisol respectively on the substrates of hot-dip galvanized steel sheets, 5% Al-Zn alloy coated steel sheets, and 55% Al-Zn alloy coated steel sheets. The PVC film undergoes embossing, creating the film with great touch and beautiful textures. The product possesses the properties of beauty, superb corrosion resistance and formability.

The three categories of **Yieh Phui Embossed PVC Plastisol Pre-Painted Steel Sheets** (hereinafter called **Yieh Phui Embossed PVC**) are specially designed to provide high protection for indoor and outdoor uses. The film shows excellent chemical resistance, salt spray resistance, and gas resistance. Under the protection of high build film, **Yieh Phui Embossed PVC** will perform for a period of 15 years in normal atmospheric conditions.

### RECOMMENDED END USES

**Yieh Phui Embossed PVC** is suitable to be used for roofing and siding in industrial or residential districts, especially in coastland with severe corrosion, chemical industrial district, or some environments that require high corrosion resistance.

Due to its beautiful appearance, the product is suitable to be used for interior decoration (such as ceiling, partitions, fireproof boards, etc.), cases of electrical appliances (such as refrigerators, washing machines, vending machines, computers and their peripherals, walk-in coolers, refrigerated vehicles, etc.)



### PRECAUTIONS

The three categories of **Yieh Phui Embossed PVC** shall not be used in the conditions with continuous high temperature of over 65° C or intermittent high temperature of over 80° C. When exposed to normal temperature, the product can maintain color stability. Nevertheless, for roofing application, when exposed to strong sunlight, light colors are recommended. Due to the fair heat resistance of PVC Plastisol, the product is not suitable to be exposed to strong sunlight all year round. Under this harsh condition, slight contamination might occur on the surface of the product, but its properties are not affected. Cleaning the steel sheets with soft brushes regularly will remove the contamination. For the aforementioned environment, we recommend to use the three types of **Yieh Phui PVDF Pre-Painted Steel Sheets** or **Yieh Phui High Build PVDF Pre-Painted Steel Sheets**.

**Yieh Phui Embossed PVC** possesses excellent resistance against acid, alkaline, mineral salts, and grease, but poor resistance against organic solvents. For this condition, the three types of **Yieh Phui PVDF Pre-Painted Steel Sheets** or **Yieh Phui High Build PVDF Pre-Painted Steel Sheets** are recommended.



**ISO 9001**  
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**MIRDC**  
OHSAS 18001  
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**MIRDC**  
ISO 14001  
Registered Firm



**QC 080000**  
**IECQ HSPM**  
Registered Firm



**ISO 50001**  
Registered Firm



## STANDARD SPECIFICATION

### Substrate

- ColorEmboss **EV-200** uses hot-dip galvanized steel sheets as its substrate. According to ASTM A 653M, coating mass is Z275 (total both sides, 275g/m<sup>2</sup> min.)
- ColorEmboss **EV-200F** uses 5% Al-Zn alloy coated steel sheets as its substrate. According to ASTM A 875M, coating mass is ZGF275 (total both sides, 275g/m<sup>2</sup> min.)
- ColorEmboss **EV-200L** uses 55% Al-Zn alloy coated steel sheets as its substrate. According to ASTM A 792M, coating mass is AZM150 (total both sides, 150g/m<sup>2</sup> min.)

Standard thickness of substrate is 0.576mm. Other thickness is also available subject to customers' needs.

### Pre-treatment

Yieh Phui uses proper pre-treatment with excellent corrosion resistance performance to form a conversion film on steel surface.

### Coating System

Two-sided 2C2B (2 Coat 2 Bake) coating system is used.

### Top Primer

Polyurethane (PU) resin with high corrosion resistance is used as the top primer, with 4  $\mu$ m nominal dry film thickness.

### Top Coat

PVC Plastisol with high stability is used as the top coat, with 200  $\mu$ m nominal dry film thickness (the minimum triple-spot average coating film thickness is 160  $\mu$ m).

### Top Color & Gloss

For color selection, please refer to Yieh Phui's standard color panels or availability subject to inquiry. Generally, top coat gloss is 20-40GU after embossing (60° reflection angle, according to ASTM D 523) or subject to inquiry.

### Back Primer

PU resin with high corrosion resistance is used as the back primer, with 4  $\mu$ m nominal dry film thickness.

**Remarks:** If Epoxy is adopted as the backercoat, no

back primer is required.

### Backercoat

There are two options of backercoat for different applications and environments.

- 1.PVC Plastisol: It is the same paint as top coat without embossing. The dry film thickness is 100  $\mu$ m (the minimum triple-spot average coating film thickness is 70  $\mu$ m). The colors are subject to inquiry. Roofing and siding for chemical plants should adopt this PVC double-sided product.

**Remarks:** For higher build of film thickness, for example, 200  $\mu$ m PVC backercoat, please contact our sales division for confirmation.

- 2.Epoxy: The dry film thickness is 7  $\mu$ m. Color options include grayish brown or gray. It is suitable to be used for interior decoration, partitions, walk-in coolers, or roof, on which PU foaming thermal insulation materials are applied.

- 3.Backercoat gloss is normally 25 $\pm$ 7GU (60° reflection angle, according to ASTM D 523)

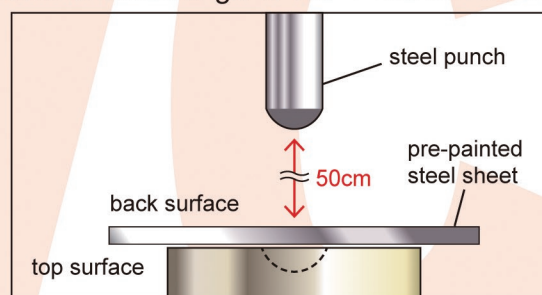
## PERFORMANCE SPECIAL PROPERTIES

### Abrasion Resistance, Falling Sand - ASTM D 968

Volume of falling sand: above 150l. The substrate is not exposed.

### Impact Test - ASTM D 2794

An impact is done by a steel punch with a hemispherical head having a diameter of 12.7mm. Raise the 500g weight up to 50cm and drop it on the specimen. Apply 3M #600 tape onto the impacted area. Remove the tape with a rapid movement at an angle of 180°. The film adheres



well without any pickoff.

#### Erichsen Test - ASTM E 643

Carve number sign ( # ) on the film. The two parallel lines, either vertically or horizontally, are 5mm apart. The speed of the penetrator is around 12±6mm/min. The bulged area is 7mm. The film adheres well without any cracking or pickoff.

#### Boiling Water Test - JIS K 6744

After the specimen is immersed completely in boiling water for 60 minutes, no blisters, cracking or exfoliation occurs.

#### Self-extinguishing Test - JIS K 6744

Place the specimen at the position where the tip of the flame of a burner contacts the edge of the specimen and heat for 20 seconds. Remove the burner and the flame on the specimen is extinguished immediately.

#### Low Temperature Test - JIS K 6744

Keep the specimen at 0±1 °C for 1 hour, and instantly carry out the 90 ° bending. No cracking or exfoliation occurs.

### ACCELERATED CORROSION AND WEATHERING TEST

#### Salt Spray Test - ASTM B 117 or JIS Z 2371

After 1500 hours, no red rust, blisters and corrosion occur.

#### Humidity Resistance Test - ASTM D 2247

After 2000 hours at a minimum of 98% relative humidity, no apparent color change or corrosion occurs.

#### Weathering Test - QUV - ASTM G 154

After 1000 hours, no apparent color change or chalking occurs. However, dark colors demonstrate more changes than light colors.

#### Chemical Resistance - Spot Test ASTM D 1308

After the specimen is immersed in 5% HCl for 24 hours, no apparent changes are observed.

After the specimen is immersed in 5% NaOH for 24 hours, no apparent changes are observed.

### HANDLING AND FORMING

In order not to damage the surface of **Yieh Phui Embossed PVC**, it must be handled cautiously during transport, forming, processing and packaging. Any improper lubricants used will affect their properties and pollute their surfaces. We strongly recommend not doing so unless it is necessary.

### STORAGE

The three types of **Yieh Phui Embossed PVC** products are properly packaged in our works. The packaging only provides short-term protection indoors during the period when delivering from Yieh Phui's works till forming or further processing at customer's plant. For the storage of this duration, relevant parties, including roll forming factories, shall take mutual responsibility for proper storage. Never store these steel coils in a humid environment or outdoors. When packaging of steel coils soaks mist or raindrops, the capillarity may cause moisture inhaling into the laps of steel sheets and later immersing the paint. (The moisture is then unable to evaporate easily from the paint.) After some time, white rust easily occurs between metallic coating and paint. This can easily deteriorate steel properties, affect its appearance and shorten its life span. The storage methods foresaid are recommended likewise for the cut-to-sheet products.

#### \*Note:

1. The life span of **Yieh Phui Embossed PVC** depends on individual atmospheric conditions. For more information, please contact our sales representatives or Technical Service Division.
2. Suggestions for, or descriptions of, the end use or application of products or methods of working contained in this catalogue are for information only and Yieh Phui accepts no liability thereof.
3. Before using products supplied or manufactured by Yieh Phui, the customer should satisfy themselves of their suitability of the products for the proposed end use.

永遠最好



**燁輝企業**  
**YIEH PHUI**

Always the best

No. 369, Yuliao Road, Qiaotou District, Kaohsiung City  
82544, Taiwan (R.O.C.)

#### MARKETING & SALES DIVISION

TEL: +886-7-6117181 EXT.7434 • 7437 • 7490 • 7496  
TEL: +886-7-6122303 • 6130443 • 6112400 • 6122328  
FAX: +886-7-6130464 • 6112397 • 6123130

#### TECHNICAL SERVICE DIVISION

TEL: +886-7-6114131  
FAX: +886-7-6114180

WEBSITE: <http://www.yiehphui.com.tw>  
E-MAIL: [sales@yiehphui.com.tw](mailto:sales@yiehphui.com.tw)

Distributor