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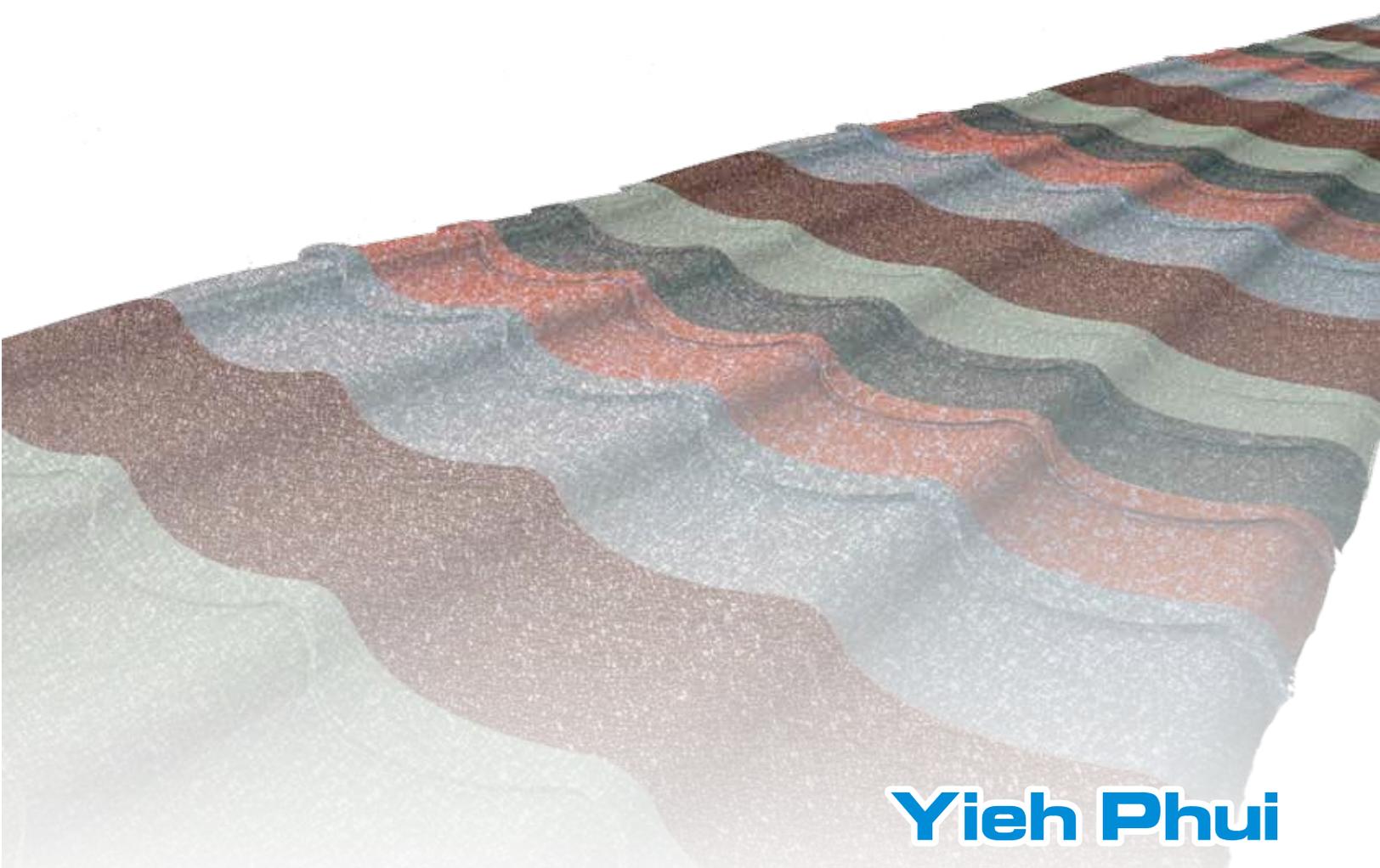


燁輝企業  
YIEH PHUI



TOP 100  
TAIWAN BRANDS

*Finest Steel at* **Yieh Phui**



# **Yieh Phui** Crystallite Silky Pre-Painted Steel Sheets



義聯集團  
E UNITED GROUP



**ColorZink® CS-20**  
Pre-Painted Galvanized Steel Sheet

**ColorFan® CS-20F**  
Pre-Painted 5% Al-Zn Coated Steel Sheet

**ColorLume® CS-20L**  
Pre-Painted 55% Al-Zn Coated Steel Sheet

# Yieh Phui Crystallite Silky Pre-Painted Steel Sheets

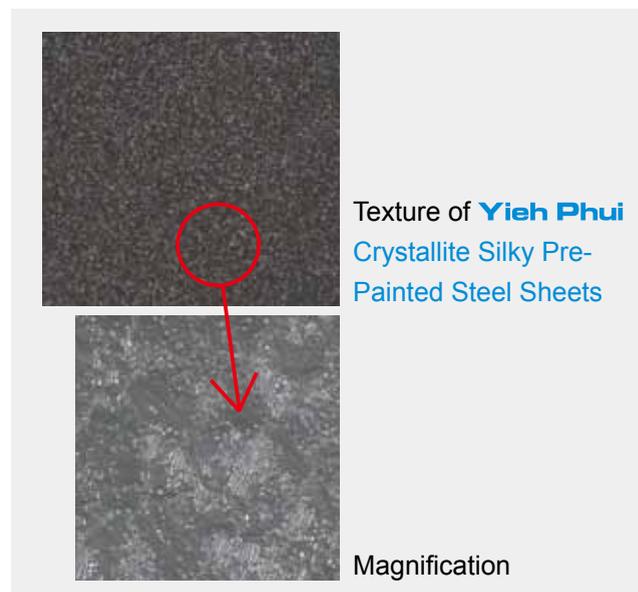
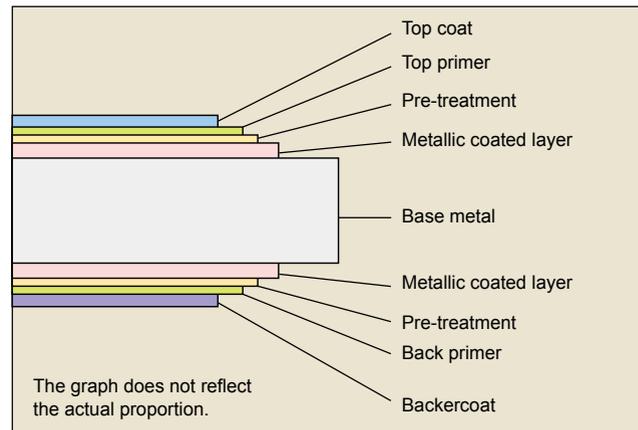
## DESCRIPTION

**Yieh Phui Crystallite Silky Pre-Painted Steel Sheets**, including ColorZink® CS-20, ColorFan® CS-20F, and ColorLume® CS-20L, all use a 2 coat 2 bake system (2C2B) with the special Polyester (PE) as the top coat. As for the substrate, it can be chosen from hot-dip zinc, 5%Al-Zn alloy and 55% Al-Zn alloy coated steel sheets. In other words, those are the superior pre-painted steel sheets with the same paint coating system but different substrates.

**Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** have glamorous colors. Yieh Phui owns world-class color coating facilities and technology in addition to the adoption of the low-gloss special paint, creating colorful concave and convex texture for the top surface of products. **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** possess the properties of high surface hardness and excellent anti-scratch ability. Their weatherability, durability, workability, and formability are all superior to ordinary pre-painted steel sheets. The colors can be retained for quite a long time. **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** own stereographic texture, a concave convex visual effect, and delicate granular surface, contrary to the flat and monotonous image of conventional pre-painted steel sheets.

## RECOMMENDED END USES

**Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** are suitable to be used for outdoor building materials, metal tiles, indoor decorative panels, panels of home appliances, etc. **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** will perform for a period of 10 years<sup>(1)</sup> in normal atmospheric conditions.



## STANDARD SPECIFICATION

The following order specification for **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** products differ in the types of substrate used: ColorZink® CS-20, ColorFan® CS-20F, and ColorLume® CS-20L. The inspection and testing processes are in accordance with the regulations in this catalogue.

### Substrate

When **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** are used outdoors for building materials or metal tiles<sup>(2)</sup>:

Note (1) : Please consult with our sales representatives or Technical Service Division about life span of the products.

(2) : Less coating mass can be used for indoor applications, such as decorative panels and panels of home appliances.

\* For more information, please contact our sales representatives or Technical Service Division. (See the back cover of the catalogue for contact information.)



**ISO 50001**  
Registered Firm



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



**ISO 9001**  
Registered Firm



**ISO 14001**  
Registered Firm



**OHSAS 18001**  
Registered Firm



**G3302 G3312** **JIS Mark**  
**G3317 G3318** **Qualified Factory**  
**G3321 G3322**  
**CRTW15001**



- ColorZink® **CS-20** uses hot-dip galvanized steel sheets as its substrate. According to ASTM A 653M standard, coating mass is Z275 (total both sides, 275g/m<sup>2</sup> min.)
- ColorFan® **CS-20F** uses 5% Al-Zn alloy coated steel sheets as its substrate. According to ASTM A 875M standard, coating mass is ZGF275 (total both sides, 275g/m<sup>2</sup> min.)
- ColorLume® **CS-20L** uses 55% Al-Zn alloy coated steel sheets as its substrate. According to ASTM A 792M standard, 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.

### Coating System

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

### Pre-treatment

Based on the different production equipment, Yieh Phui uses proper pre-treatment to achieve good adhesion of the paint film.

### Top Primer

Polyurethane (PU) with good corrosion resistance is used as top primer.

### Top Coat

Special PE with excellent weatherability is used as top coat. For film thickness, please consult with our sales division.

### Color & Gloss

For color selection, please refer to Yieh Phui's standard color panels or availability subject to inquiry. Generally, top coat gloss is under 10GU. (GU=Gloss Unit, 60° reflection angle, based on ASTM D 523.)

### Back Primer

PU with good corrosion resistance is used as back primer.

### Backercoat

Epoxy resin with good corrosion resistance or PE is used as backercoat.

### Color & Gloss of Backercoat

Selections of backercoat colors are beige, grayish white and gray. For more information, please refer to Yieh Phui's standard color panels. General backercoat gloss is 25GU. (60° reflection angle, based on ASTM D 523.)

## PERFORMANCE – TYPICAL PROPERTIES

### Pencil Hardness–ASTM D 3363: H

The pencil, MITSUBISHI ' **uni** ', produced by Mitsubishi Pencil Co., Ltd. is adopted to test hardness of paint film.

6B, 5B, 4B, 3B, 2B, B, HB, F, H, 2H, 3H, 4H, 5H, 6H  
Softer ←————→ Harder

### 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.

### Bending Test–ASTM D 4145

Take a specimen and bend it at 180° so that the inner diameter is 3 or 4 times of the sheet thickness (3T or 4T). Then stick the tape of 3M #600 tightly on the bend portion and remove the tape rapidly at 180°. The film adheres well without any flakes.

### Solvent Resistance–ASTM D 5402

Take cotton and moisten it with M.E.K. solvent or toluene. Then press 1kg force and wipe-back and forth more than 100 times. The substrate is not revealed.

### Boiling Water Test–JIS K 6744

After the specimen is immersed completely in boiling water for 120 minutes, no blisters, cracking or exfoliation occurs.

## ACCELERATED CORROSION AND WEATHERING TEST

### Salt Spray Test—ASTM B 117 or JIS K 5600-7-1

After 1000 hours, no red rust, blisters (over 6F) and corrosions can be seen in the unscribed area.

Remarks: 150 hours for un-guaranteed side (back side)

### Weathering Test—QUV ASTM G 154 or JIS K 5600-7-8

After 3000 hours, no apparent color changes or chalking with unaided eyes. Obviously, the weatherability is superior to silicone modified Polyester (SMP) pre-painted steel sheets.

### Humidity Resistance Test—ASTM D 2247

After 1000 hours at a minimum of 98% relative humidity, no apparent color change or corrosion occurs.

## HANDLING AND FORMING

In order not to damage the surface of **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets**, they 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

**Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** 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 film layer. (The moisture is then unable to evaporate easily from the paint film layer.) After some time, white rust easily occurs between metallic coating and paint film layer. This can easily deteriorate steel properties, affect its appearance and shorten its life span.

The storage methods foresaid are recommended likewise for formed cut-to-sheet products.



Siding (metallic composite panel) of Mildex Optical Inc. in Kaohsiung adopts **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets**.

**\* Note :**

1. The life span of **Yieh Phui Crystallite Silky Pre-Painted Steel Sheets** 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.

ColorZink®, ColorFan®, and ColorLume® are registered trademarks of Yieh Phui.

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