



GENERAL DESCRIPTION

Colorite Thermo-Cool is Pre-Painted Galvanized steel sheet coated with thermal reflective paint, consisting of special ceramic pigments. This product is designed to lower the surface temperature of buildings when used for roofing/wall applications and provides thermal comfort and energy savings.

Anti-Weathering Limited Warranty: 7 Years (UNICOIL Technical terms and conditions applicable).

SUBSTRATE

Galvanized steel – G60 (180gsm)

TYPICAL USES

Roofing and Walling, Sandwich Panels, K-Span, Cold Rooms, etc.

DIMENSIONS: (For normal supply products)

THICKNESS*(MM)(TCT-P)	WIDTH**(MM)	ZINC COATING (GSM)
0.35 to 1.20	700 to 1,300	Minimum 180 (G60)

*For grade S550, minimum thickness is 0.46 mm

**For width less than 700 mm are supplied with slit edge

For specific dimensions please contact Sales and Marketing Dept.

ADVANTAGES:

- High Solar Reflection
- Reduces Steel Sheets' Heat Absorption
- Reduces Heat Inside the Building
- Less Air-Conditioning Usage in Pre-Engineered Buildings
- Reduces Thermal Stresses and Extends Product's Life Time
- Allows using Dark Colors with Minimum Absorption of Heat
- Improves Thermal Comfort

TCT-P – Total Coated Thickness with Paint Film (Steel thickness + Zinc coating thickness + Paint thickness)

Standards & Grades








Standard	Description	Sub-Strate Standard	Grades
SASO ASTM A755/ A755M	Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.	SASO ASTM A653/A653M	CS-Type A, B, C, FS Type A, B,
ASTM A755/ A755M	Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.	ASTM,A653/A653M, ASTM,A792/A792M, Aluminum Flat coils	SS33, SS37, SS40, SS50, SS55, SS60 & SS80
EN10169	Continuously organic coated (coil coated) steel flat products Technical delivery conditions	EN 10346	DX51D, DX52D, S220GD, S250GD, S280GD, S320GD, S350GD, S390GD, S420GD & S550GD
JIS G3312	Pre-Painted Hot Dip Zinc coated Steel Sheet and Strip	JIS G3302	SGCC, SGCD1,S-GC340, SGC400, SGC440 & SGC570
AS 2728	Prefinished/pre-painted sheet metal products for interior/exterior building, applications Performance requirements	AS 1397	S250, S300, S350, S450, S550











Paint System

Pretreatment	Corrosion resistance proprietary conversion coating each side
Primer Coat	Universal Corrosion inhibitive Primer Nominal thickness- 5µm each side
Finish Coat	Custom formulated system with solar reflecting special ceramic pigments. Nominal thickness 20 µm on the top or weather side.
Backing Coat	Foam compatible epoxy coat or Polyester based custom formulated off white Nominal thickness: 5-7 µm. Back coat can be in the same topcoat color and DFT as required
Gloss (60°)	Nominal 30±5% Other gloss levels may be available on request

GUARANTEED PAINT PROPERTIES


	TEST	TEST METHOD	DESCRIPTION	RESULTS
	Hardness (Pencil)	ASTM D 3363	Pencil	F or harder
	Adhesion -T bend	ASTM D 4145	T-bend	3T or less (No Pickoff)
	Flexibility	ASTM D 4145	T-bend	3T or less (no cracking)
	Adhesion - Reverse impact	ASTM D 2794	Reverse impact	> 9 joules
	Cross hatch	ASTM D 3359	Cross hatch	> No paint removal
	Gloss 60° (%)	ASTM D 523	Gloss	30±5%
	Color Difference	ASTM D2244	Light colors	Δ E : ≤1.0
			Medium Colors	Δ E : ≤ 1.5
			Dark Colors	Δ E : ≤2.0 / Visual match
			Metallics	Visual match


EXPECTED PRODUCT SERVICE PERFORMANCE				
	PROPERTY	TEST METHOD	DESCRIPTION	RESULTS
	Resistance to UV (QUV-A) ASTM G53	Exposure Hours		1000 Hrs
		ASTM D2244	Color Change	DE Hunterlab - Light color ≤ 4 Int.Color ≤ 6 Dark color ≤ 8
		ASTM D4214	Chalking	ASTM Rating 4 - 2
		ASTM D523	% Gloss Retention	≥ 40
	Natural well washed exposure ASTM G7	Exposure Years		7 Yrs
		ASTM D2244	Color Change (Non Vertical)	DE Hunterlab - Light color ≤ 6 Int.Color ≤ 9 Dark color ≤ 12
		ASTM D4214	Chalking	ASTM Rating 4 - 2
		ASTM D523	% Gloss Retention	≥ 30
	Resistance to corrosion (Salt Spray) ASTM B117	Exposure Hours		500 Hrs
		ASTM D714 & ASTM D1654	Blister Density, Size & Corrosion Creep	Blister density- Few, Blister size rating ≥ 8 Undercut from scribe $\leq 2\text{mm}$
	Resistance to humidity at $38 \pm 1^\circ\text{C}$ ASTM D 2247	Exposure Hours		1000 Hrs
		ASTM D714	Blister Density & Size	Blister density- Few, Blister size rating ≥ 8
	Resistance to abrasion	ISO 1518	Scratch	$\geq 2000\text{gms}$
	Resistance to Heat EN 13523-13	ASTM D2244	$90^\circ\text{C} - 700$ hours or $60^\circ\text{C} - 1000$ Hours	$\Delta E \leq 5$, $\Delta \text{Gloss} \leq 7\%$
	Resistance to fire	BS 476 Part 7	Fire rating	Class M1
	Total Solar Reflectance	ASTM G159	Solar Reflectance	TSR* values for different colors: RAL 3009 – 23 % RAL 9005 – 33 % RAL 8017 – 24 % Arabian Beige – 49 % RAL 7024 – 25 % RAL 1015 – 51 % RAL 6003 – 27 % RAL 7035 – 60 %


NOTE

*TSR values for other colors can be provided on request.
SRI values and Thermal emittance values can be provided on request.

1. For most products, the metallurgical process which is inherent in the paint stoving cycle will result in some loss of ductility compared with unpainted product. However, minimum strength levels designated by relevant standards will still be applicable.

2. Values quoted are for  colours under normal well washed conditions of exposure.

If it is intended to use  in an exterior application within 1 km of salt marine location, or severe industrial or abnormally corrosive environment, or in areas not washed by rain or in applications where it will be wholly or partially buried in the ground, please contact UNICOIL for advice. Improper storage or use of non approved roll forming lubricants may adversely affect colour. Material which becomes wet while in stacks or bundles must be separated and dried.

3.  has good resistance to accidental spillage of solvents such as methylated spirits, white spirits, mineral turpentine, trichloroethylene and dilute mineral acids & alkalis. However, all spillages should be immediately removed by water washing and drying.

4. Properties guaranteed on minimum G60(180 GSM) .

