

GENERAL DESCRIPTION

ColoRite Hi-Build is a pre-painted galvanized steel developed to provide a durable material for exterior applications with good formability, good chemical resistance and corrosion resistance, suitable for highly aggressive (C4 & C5) environment conditions. The paint is a High Build Polyurethane Polyamide system, applied on a Galvanized substrate of Minimum 275 GSM (G90) zinc coating, with paint film thickness ranging from 60µm to 120 µm on weathering side.

Anti-Weathering Limited Warranty: 20 Years (UNICOIL Technical terms and conditions applicable).

SUBSTRATE

Galvanized steel G90 (275gsm)

TYPICAL USES

Roofing and walling panels for building in Marine and Industrial environments

DIMENSIONS: (For normal supply products)

THICKNESS*(MM)(TCT-P)	WIDTH**(MM)	ZINC COATING (GSM)
0.55 to 1.20	700 to 1,300	275 (G90)

*For width less than 700 mm are supplied with slit edge
**For specific dimensions please contact Sales and Marketing Dept.

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, SS33, SS37, SS40, SS50, SS55, SS60 & SS80
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	
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 High Build Primer thickness 30µm.
Finish Coat	Custom formulated high-build Polyurethane and Polyamide system. High Build thickness-30 µm microns to 90 µm on the top or weather side. The finish coat is available on all RAL standard colors and other colors may be available on request.
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 25±5% Other gloss levels may be available on request

GUARANTEED PAINT PROPERTIES

	TEST	TEST METHOD	DESCRIPTION	RESULTS
	Hardness (Pencil)	ASTM D 3363	Pencil	H or harder
	Adhesion -T bend	ASTM D 4145	T-bend	1T or less (No Pickoff)
	Flexibility	ASTM D 4145	T-bend	1T 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	25±5%
	Color Difference	ASTM D2244	Light colors Medium Colors Dark Colors Metallics	Visual match



EXPECTED PRODUCT SERVICE PERFORMANCE				
	PROPERTY	TEST METHOD	DESCRIPTION	RESULTS
	Resistance to UV (QUV-A) ASTM G53	Exposure Hours		2000 Hrs
		ASTM D2244	Color Change	DE Hunterlab - Light color ≤3 Int.Color ≤5 Dark color ≤7
		ASTM D4214	Chalking	ASTM Rating 6
		ASTM D523	% Gloss Retention	≥ 50
	Natural well washed exposure ASTM G7	Exposure Years		15 Yrs (C4 & C5)
		ASTM D2244	Color Change (Non Vertical)	DE Hunterlab - Light color ≤5 Int.Color ≤8 Dark color ≤12
		ASTM D4214	Chalking	ASTM Rating 6
		ASTM D523	% Gloss Retention	≥ 50
	Resistance to corrosion (Salt Spray) ASTM B117	Exposure Hours		2000 Hrs
		ASTM D714 & ASTM D1654	Blister Density, Size & Corrosion Creep	Blister density- Few, Blister size rating ≥8 Undercut from scribe ≤2mm
	Resistance to humidity at 38± 1°C ASTM D 2247	Exposure Hours		1000 Hrs
		ASTM D714	Blister Density & Size	Blister density- Few, Blister size rating ≥8
	Resistance to abrasion	ASTM D 968	Falling sand test	110 ltrs for 60 µm
		ASTM D 4060	Taber abraser 1000g CS10 wheels	≤30 mg per 1000 cycles
		ISO 1518	Scratch	≥3000gms
	Resistance to Heat EN 13523-13	ASTM D2244	90°C - 700 hours or 60°C - 1000 Hours	ΔE ≤ 2.5 ΔGloss ≤ 5%
	Kesternich	ASTM G87	No. Of Cycles	10, 15 & 20 cycles for 60, 90 and 120 microns - No significant blistering. Edge lamination <2mm
	Chemical Resistance (Acid & Alkali)	AAMA 621	HCL, HNO3 & H2SO4	No discoloration/No blistering
	Resistance to solvents	ASTM D1308	Solvent	No discoloration/No blistering
	Resistance to fire	BS 476 Part 7	Fire rating	Class M0

NOTE

- 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.
 - Values quoted are for standard **ColRite HI-BUILD** colours under normal well washed conditions of exposure.
- If it is intended to use **ColRite HI-BUILD** 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.
- ColRite HI-BUILD** 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.
 - Properties guaranteed on G90 or G115 Galvanized steel.

