



**INTERNATIONAL
STEELS LIMITED**



COLOR COATED STEEL



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**LARGEST FLAT STEEL MANUFACTURER
AND EXPORTER IN PAKISTAN**



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Color Coated Steel

ISL's Continuous Color Coating facility produces color coated steel using a Wet Paint Coating technology. The 84,000 MT state-of-the-art facility processes and coats a wide range of substrates like cold rolled, galvanized, galvalume, aluminum and stainless steel, in any imaginable color.

The high-quality color coating enhances the corrosion resistance of substrates and adds to their aesthetic appeal. The color coated steel produced at ISL is stain-resistant, corrosion-resistant and scratch-resistant, which makes it ideal for various commercial and industrial applications.



MAX. WIDTH & THICKNESS*

- 1,250 mm
- 0.28 mm - 1.50 mm
(0.011" - 0.060")

GRADES

As per ASTM A755, JIS G3312 and equivalent standards

PROPERTIES

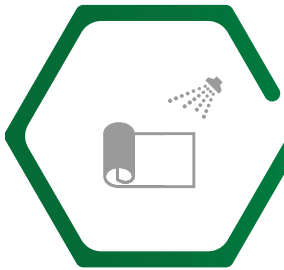
- Heat Cured Paint on GI Substrate
- Single / Double Sided Painted
- Finish Coat (Polyester / PVDF)



Manufacturing Process

01 DEGREASING

The coil is degreased to remove machining fluids and other contaminants



03 PRIMER COATING

Primer is applied to ensure better adhesion of paint to the surface while providing additional protection to the material



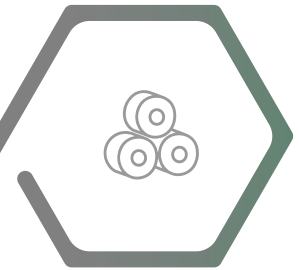
05 FINISH COATING

At this stage, top coat and backer coat are applied to the primed material



07 RECOILER

Recoils the steel for packing and dispatch



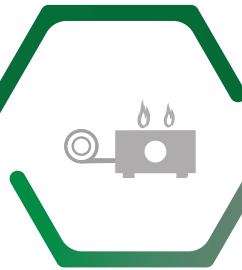
02 CHEMICAL TREATMENT

A thin layer of chromate is applied in order to prepare the steel for primer coating



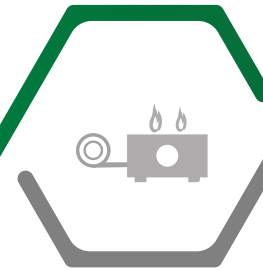
04 PRIME OVEN

Primer coated steel is baked in an oven to ensure adhesion to the substrate



06 FINISH OVEN

The final coat is baked again to ensure permanency of the surface coat



Manufacturing Standards

Our products are manufactured as per ASTM A755, JIS G3312 and equivalent standards related to commercial and structural grades in sheets and coils.

Paint Systems

ISL uses Polyester (PE), Polyvinylidene Difluoride (PVDF) and Polyamide paint systems.



PE PAINT SYSTEM

PE paint system is economical and is recommended for materials exposed to normal atmospheric conditions.



POLYVINYLIDENE DIFLUORIDE (PVDF) PAINT SYSTEM

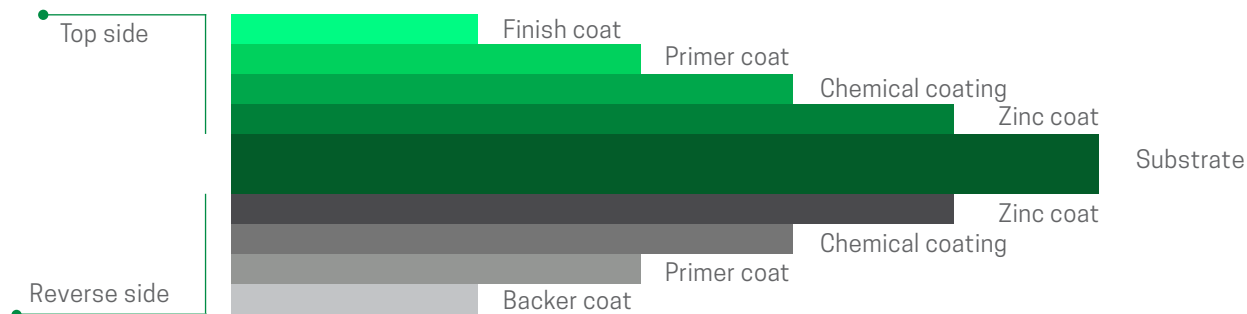
Polyvinylidene Difluoride PVDF paint is used on materials exposed to severe atmospheric conditions due to its stable corrosion and UV resistance.



POLYAMIDE PAINT SYSTEM

Being UV durable, oxidation and scratch-resistant; the Polyamide paint system in combination with high-build primers, is used on materials exposed to extremely corrosive environments.

MATERIAL COMPOSITION



STANDARD PRODUCT

Top side finish coating, reverse side primer plus backer coat



Production Facilities

Two Coat - Two Bake system

ISL's color coating line applies uniform color thickness and highly reproducible colors and gloss levels, thanks to the Two coat - Two bake system that enables application of primer and top coat in the same run. Different color coats can be applied to the front and back simultaneously.

Grades and Specifications

Applicable Nominal Thickness	0.011" - 0.060" (0.28 mm - 1.50 mm)
Standard Width Available before Slitting	29.53" - 49.21" (750 mm - 1,250)
Coil weight (MT)	1.5 - 10
Coil ID (mm)	20" / 508 mm
Total coating thickness (micron)	30 - 100 (including metallic coat, top, back primer)
Substrates	Galvanized steel, Galvalume and Aluminium
Finishes	Smooth, Matt, High Gloss and Grain
ASTM A755 Grades	CS Type A / B
JIS G3312 Grades	CGCC
Zinc Coating (gm/m ²)	Z50 - Z180
Base Material	Galvanized : As per ASTM A653 / JIS G3302 / EN 10327 Galvalume : As per ASTM A792 Aluminium : As per ASTM B209

*Thickness tolerance: 1/2 of ASTM A924 and 1/2 of JIS G3312



Quality Assurance Tests

PROPERTIES	TEST	TESTING STANDARDS			POLYESTER PAINT
COLOR COATED COILS AND SHEETS		JISG 3312	EN 10169	ASTMA 755	
Dry film thickness	Coating thickness	-	EN 13523 - 1	ASTM D 1186	As per order
Gloss	Specular gloss at 60°	13.2.3	EN 13523 - 2	ASTM D 523	20 - 90 GU
Scratch hardness	Pencil hardness	13.2.3	EN 13523 - 4	ASTM D 3363	H - 2H
Impact resistance	Reverse impact test	13.2.4	EN 13523 - 5	ASTM D 2794	100 kg - cm
Adhesion quality	Cupping test	13.2.5	EN 13523 - 6	ASTM D 643	6.5 mm (min)
Flexibility	T-bend test	13.2.2	EN 13523 - 7	ASTM D 4145	1T - 5T
Corrosion resistance	Salt spray (fog) test	13.1.3	EN 13523 - 8	ASTM D 117	500 hrs
Solvent resistance	M.E.K. rubbing test	-	EN 13523 - 11	ASTM D 4213 ASTM D 5402	100 dr (min)
Adhesion	Cross hatch cutter with standard adhesion tape	13.2.2	EN ISO 2409	ASTM D 3359	4B
Measurement of color difference	Data color spectrometer	-	-	-	ECC standard or as per agreement with the customer

TESTS FOR FALSE CEILING AND ROLLER SHUTTER APPLICATIONS

TEST STANDARD AS PER ECCA	FALSE CEILING APPLICATION	ROLLER SHUTTER APPLICATION
Coating thickness (Top)	20 microns +/-2	20 microns +/-2
Coating thickness (Bottom)	5 microns +/- 2	5 microns +/- 2
Gloss at 60	10 to 90%	20 to 35%
Pencil hardness	F-H	F-H
Impact (kg.cm)	32	32
Erichsen (mm)	5	5
Cross hatch	100%	100%
Radius bend	1T	1T
Solvent resistance	100	100
Humidity	Good	Excellent
Salt spray	Good	Excellent
Virtual inspection of color difference	Good	Good





Applications



AGRICULTURE

(Grain silos, sprayers, pans, feeding troughs)



COLD STORAGES AND UNITS



DOMESTIC USE

(Trunks, tubs, buckets, storage bins, water tanks)



CONSTRUCTION



MEP APPLICATIONS

(Ducting, drums/barrels, containers, thermal cladding, air-conditioning ducts, railway coaches and others)



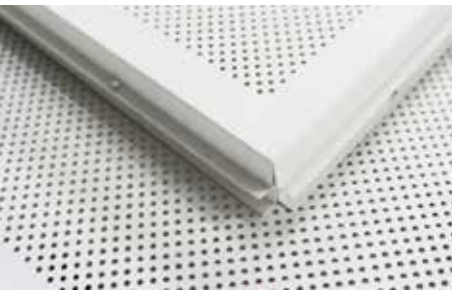
ELECTRICAL APPLIANCES



FURNITURE AND FIXTURES



FALSE CEILING



OUTDOOR APPLICATIONS





Why ISL?



AVAILABILITY

ISL's efficient inventory management system ensures that running items are available ex-stock.



GLOBAL FOOTPRINT

With close proximity to the country's sea port, ISL has a strategic location that provides efficient access to regional and international markets.



NATION-WIDE SALES NETWORK

A vast nationwide dealership network caters to all major cities of Pakistan.



CUSTOMIZATION

ISL offers various value-added products and services as per customer requirements, ranging from special grade steel products to services like custom cutting and slitting.



PRODUCT QUALITY

ISL's products are manufactured using high-quality raw material sourced from world's leading tier-1 mills. The steel produced in ISL's cutting-edge facility completely conforms to the global standards of steel manufacturing.



PRECISE DIMENSIONAL TOLERANCE

Minimal deviation in mechanical properties due to state-of-the-art production and quality control systems.



ENDURANCE

ISL's color coated steel is durable, corrosion-resistant and endures extreme weather conditions.



SUPERIOR AESTHETICS

Wide range of colors and profiles are available which can be chosen according to the preference, usage and purpose.



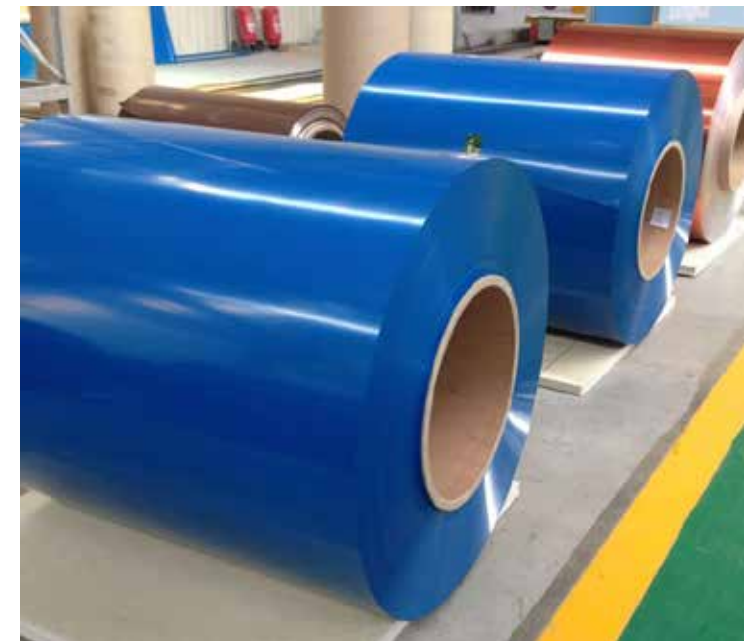
AFTER SALES SUPPORT

ISL being a customer-centric company, ensures peace of mind to its customers with its comprehensive after sales support and swift handling of complaints and queries.



PACKING STANDARDS

Exceptional packaging standards ensure that ISL products reach their destinations in a prime and "mill fresh" condition.





Value-added Services

CUT-TO-LENGTH

ISL has the capacity to provide cut-to-length material depending on customer requirements.



THICKNESS RANGE

0.28 mm to 1.50 mm



COIL WIDTH

1,250 mm max.



COIL WEIGHT

25 tons max.



CUTTING WIDTH

min. 400 mm, max. 1,250 mm



CUTTING LENGTH

min. 300 mm, max. 5,000 mm



PALLET WEIGHT

2.5 MT max.



TOLERANCE OF CUTTING LENGTH

+/- 1 mm max.





SLITTING SPECIFICATIONS

ISL's Service Center has the capability to provide slitted coils as specified by customers.



THICKNESS RANGE

0.15 mm - 2.60 mm



COIL WIDTH

1,250 mm max.



COIL WEIGHT

25 tons max.



INTERNAL DIAMETER

508 mm



EXTERNAL DIAMETER

1,700 mm max.



SLIT WIDTH TOLERANCE

+/- 0.1 mm



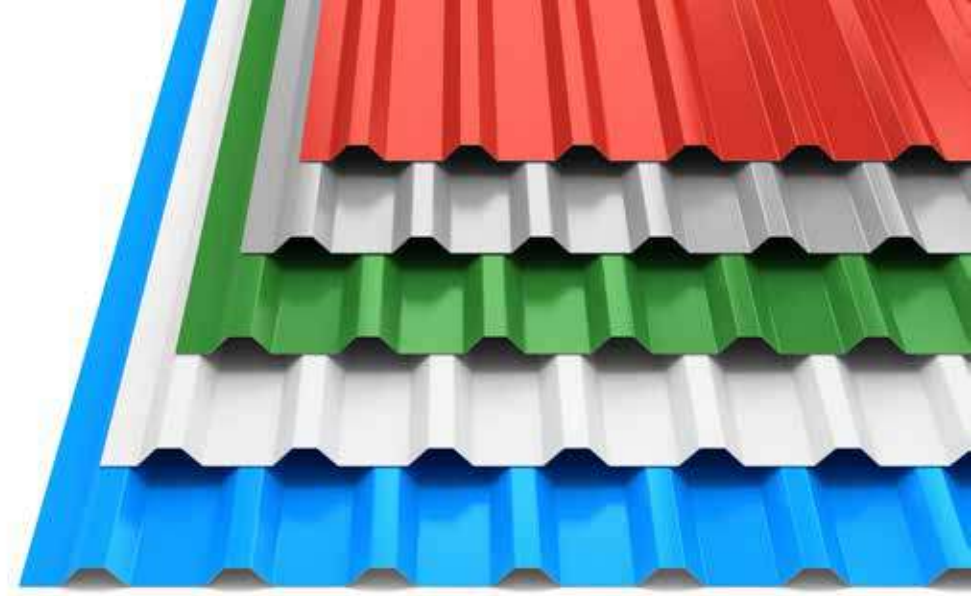
MINIMUM SLITTED WIDTH

25 mm





Profile Specifications



Features :

Light Weight: ISL's color coated profiles can easily be installed or dismantled.

Fine Finish: These sheets are uniformly coated to offer superior finish and aesthetics.

Heat Insulation: The color coating on these sheets have strong heat insulating properties.

Water Resistant: With water resistant properties, these sheets are rust-proof.

Weather Resistant: Without getting damaged, color coated steel can bear extreme weather conditions.

High Strength: Better tensile strength enable these sheets to bear heavy loads.

Attractive Appearance: ISL's color coated profiles are available in an attractive range of colors that makes them appealing in look.

Durability: ISL's color coated profiles are highly durable and do not require any additional protective coating; this makes them an economical building material.

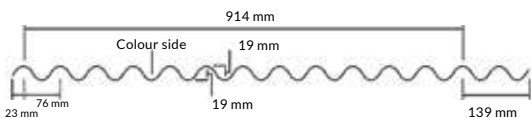
Applications :

Storage buildings or warehouses, exhibition halls, gymnasiums, industrial buildings, shopping malls, glasshouses, household roofing, commercial buildings etc.

ISL offers these types of profiled sheets :

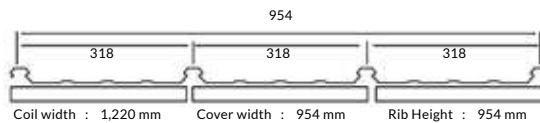
SINUSOIDAL

Coil Width	:	914/1,000/1,219 mm
Effective Width	:	760/846/1,064 mm
Radius	:	20 mm
Depth	:	16 mm
Pitch	:	65.9 mm
Thickness	:	0.3 mm to 0.60 mm



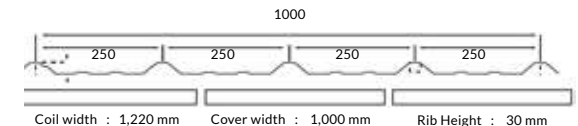
CLIP LOCK

Coil width	:	1,219 mm
Effective Width	:	954 mm
Depth	:	42 mm
Pitch	:	315 mm
Thickness	:	0.40 mm to 0.60 mm



SCREW DOWN

Coil width	:	1,219 mm
Effective Width	:	1,000 mm
Depth	:	30 mm
Pitch	:	250 mm
Thickness	:	0.30 mm to 0.70 mm



Transport and Handling Precautions



LIFTING DEVICES

Always use proper lifting devices like C-hook or parallel hooks, magnetic lifters, nylon slings etc. to lift, load and unload coils and sheet packets.



RUBBER SHEETS

When transporting coils in trucks, use rubber sheets beneath the coils or an exclusive transport stand.



SKIDS

While stacking the coils on floor, ensure that they are placed on proper skids to avoid formation of dents.



HANDLING WITH SLINGS

Nylon slings are preferred. Use rubber pads on coils where the sling comes in contact with them.



SECURE LASHING

While transporting in containers, coils must be lashed adequately and securely to avoid damage to the products.



SECURE STACKING

While transporting, ensure that the stacked sheets are firmly secured down, to avoid them slipping off due to vibrations and movements.



FORKLIFT

Do not push cut-sheets or roll the coils with a forklift, since this could cause scratching.



SLINGS & ROPES

Secure coils and sheet packets with slings/chains/ropes while transporting in trucks. Use rubber pads between these fasteners and steel products.



MOVING & SHIFTING

While using lifter, always carry sheets in a packed condition to prevent them from slipping or getting scratched.



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