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A COLORFUL WORLD OF POSSIBILITIES WHERE STRUCTURES PAVE A VIBRANT FUTURE





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ABOUT APL APOLLO

Welcome to APL Apollo, where innovation, excellence, and reliability converge to revolutionize the steel industry. As a premier manufacturer and supplier of high-quality steel products, we take immense pride in our unwavering commitment to pushing boundaries and setting new standards in the industry.

APL Apollo Tubes Limited stands tall as the largest producer of Structural Steel Tubes in India.



Our Legacy of Excellence:

With a legacy spanning over a decade, APL APOLLO has emerged as a global leader in the production of structural steel tubes. Our unwavering dedication to quality and customer satisfaction has propelled us to the forefront of the industry, earning us recognition as one of the largest players worldwide.



Innovative Capacity Investment:

We believe in investing in the future. Through consistent investment in our manufacturing

capacities, we have positionedhave positioned ourselves as pioneers in the industry. Our strategic approach to capacity creation ensures a balanced manufacturing infrastructure across regions, enabling us to meet demand with precision and efficiency.



Pioneering Technology Adoption:

At APL APOLLO, innovation is ingrained in our DNA. For the past two decades, we have been at the forefront of bringing cutting-edge technology to India's shores. From groundbreaking manufacturing processes to state-of-the-art machinery, we continuously push boundaries to create new products and markets.



Expansive Product Portfolio:

Our commitment to innovation is reflected in our expansive product portfolio, comprising over 2,000 SKUs. From structural tubes to hollow sections, pre-galvanized tubes to precision tubes, we offer a diverse range of products that cater to a multitude of applications and sectors.



Robust Distribution Network:

We understand the importance of accessibility. That's why we have developed the largest and most expansive distribution network in the industry. Supported by robust supply chain solutions, our multi-layer network ensures that our products are readily available across India.



Driving Trade Transformation:

We are not content with just meeting benchmarks; we strive to set them. By providing innovative products, rapid delivery, and growth opportunities to our channel partners, we have revolutionized trade practices within the industry.



A Commitment to Innovation:

Innovation is at the heart of everything we do. We remain steadfast in our commitment to developing innovative solutions that address evolving customer needs and deliver increased value. Our cutting-edge facility near Raipur is a testament to this commitment, where we manufacture value-added products that are firsts for the Indian markets.



30 Countries across the Globe

Manufacturing units

SUSTAINABILITY IS AT THE CORE OF APL APOLLO

Our environmental management is not a strategy but a philosophy embedded in the substrata of the enterprise, it allows us to reduce our carbon footprint and also inspires our customers meet their own environmental management aspiration.



Products:

We are the first and pioneering Company to innovate readymade Chaukhat, Fence, Plank, and Hand rails under Steel for Green concept which replaced conventional wood applications in building construction. Our product saves approximately 250,000 trees every year.



Energy:

Our total renewable energy stood at 49,618 MW, which is 38% of APL Apollo's total energy consumption. To achieve its near-term emissions reduction targets, APL Apollo plans to increase the use of renewable energy. At two of APL Apollo's plants (in Malur, Karnataka and Hosur, Tamil Nadu), over 85% of energy needs were met through renewable energy.



Green cover:

We have planted 5,000 plants on 3.1 acres of government-provided land in Gendupur Village, Sikandrabad, close to our AMPL (A25/Plot 22) and APL A19 manufacturing plants. Furthermore, we have undertaken a large number of plantation activities in our plants at APL Apollo Building Products Private Limited (ABPL). For the plantation of thick, natural mini-forests, we have adapted the Miyawaki technique pioneered by the Japanese botanist Akira Miyawaki. The method will result in ten times faster plant growth and a plantation that is 30 times denser than typical.



Water:

Over the years, we have persevered to optimise water consumption at our facilities by strengthening our shop-floor processes. Our patient efforts have yielded heartening results. Over the last three years (FY20-FY23), our total water consumption declined by 9% YoY despite a 30% jump in production. Our two facilities at Murbad and Malur are Zero-Liquid Discharge certified. To rejuvenate the groundwater table, we have created rainwater harvesting pits of around 353 cubic meters.

Dow Jones Sustainability Indices



In Collaboration with RobecoSAM (

DJSI FY2023 SCORE

(IN THE PEER INDUSTRY COMPRISING OF GLOBAL COMPANIES)

SCORE REACHED A HIGH OF 40 POINTS, ABOVE THE INDUSTRY AVERAGE OF 24

IMPROVEMENT ACROSS AREAS



Social Dimension



Governance & Economic Dimension



Environmental Dimension





OUR PLANT

The Raipur Facility: Driving Innovation and Sustainable Growth

Manufacturing Plant Overview:

APL Apollo's manufacturing facility located at Simga, Raipur spans across a vast 600-acre landscape, our facility stands as a testament to our commitment to excellence in the manufacturing of steel tubes and building products.

With a current annual capacity of 1 million tons and additional expansion capabilities of 0.3 million tons, our facility is equipped to meet the growing demands of various industries.

Our facility boasts a range of groundbreaking product innovations, including:



India's first 20mm HR Slitting Line



Introduction of 1000 x 1000mm Structure Tubes, a pioneering feat in India and globally.



Launch of India's first 500 x 500mm Structure Tube Section



Implementation of India's first Thicker Colour Coating Line, offering superior coating thickness ranging from 1.60mm to 2.50mm

Our operations prioritize environmental sustainability, with features such as:

- · A Zero Discharge Plant, ensuring minimal environmental impact.
- · Implementation of an Acid Regeneration Plant, promoting eco-friendly practices.





CHALLENGES IN GALVANIZED STEEL

- Red Rust & white Rust
- Flux Deposition
- Moisture content
- Entire dependence only on one layer and that is Zinc Coat
- · If Zinc coating fails—there is no more layer of protection at all
- · The entire life of steel is based on Zinc coat only

This results in-





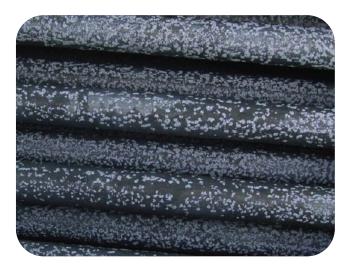




IS ZINC POROUS OR WATER PROOF?

Zinc is not waterproof but it can be used to help protect other metals from high levels of corrosion when exposed to water. Rather than being used in its pure form, zinc is most often used to form metal casting alloys. This is because zinc corrodes at a slower rate than many other metals.

2 basic types of rust:











Red Rust

A REVOLUTIONARY CHANGE - WHY PPGI & PPGL IS BETTER THAN GALVANISED PRODUCT

Case Study

Cutting Edge of Corrosion Resistance - Post painted galvanized vs. Pre painted

- Even with exposed cut edges, pre painted metal outperforms post-painted parts.
- Pre painted metal louvers with exposed cut edges were tested in the field against post-painted metal louvers, one with an electro coat, a second with a powder finish, and a third with a spray finish. The parts in all instances were made of hot dipped galvanized steel and louvers were exposed to the same environment over time in Daytona Beach, Florida.
- After 16 months, 44 months, and 68 months of exposure to the elements, comparisons showed the pre-painted parts were repeatedly and significantly more corrosion resistant than the post-painted parts.
- Experts agree the reason that the pre painted parts outperformed all three post-painted parts is that pre painted metal sheet is uniformly cleaned, treated and painted as a flat surface, so the edge to edge and side to side variability is virtually eliminated.



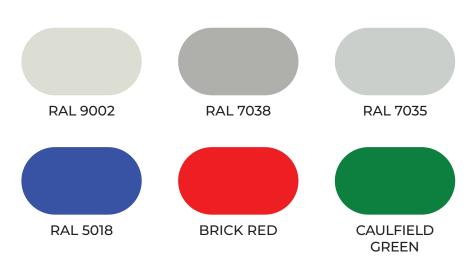


APL APOLLO PURLIO

APL APOLLO PURLIO are steel elements which are used as support structures in pre engineered buildings, mainly below the roofs. Purlins provide extra roof support, creating a horizontal diaphragm that provides support to the weight of the roof and deck. Purlins are installed parallel to the building eave and are supported by rafters or walls. The raw material used to fabricate purlins are cold formed steel.

It is specially designed for C & Z purlins which are used for various Purlin applications. They are more economical and are environment friendly alternative for infrastructures making them more durable and malleable in comparison to galvanized Iron(GI). Their highly flexible extra bend properties from OT to 3T, Edge-Protection with Coatings, and Epoxy coatings for better adhesive qualities over metal make them suitable for bridging and a comprehensive range of accessories of purlins and girts.

COLOUR OPTIONS



*More colour options available on requirement



KEY FEATURES



4 Coat Paint System



30 Micron Paint Coating



Paint



Metallic Coating Z80/Z120/Z180/Z275



Coil Width up to 750mm



Certified

QUALITY TESTS



750 HOURS Weathering Test





750 HOURS





UP TO 2 HOURS
Weathering Test

Salt Spray

Heat Resistant

MEK Solvent



UP TO 24 HOURS





WHY SHOULD PURLIO REPLACE GALVANIZED ?

Basic Parameters required for PEB	Conventional Method of using Galvanised sheets	What does Purlio offer for PEB?	Benefits of using Purlio
Salt Spray	≤ 120 Hrs	Between 750 to 1000 Hrs	Much better weatherability, Corrosion resistance and Humidity resistance
Zinc Coating	275 GSM	120 GSM and 25 μ further paint coatings	100% Prevention from White Rust & Red Rust
Aesthetics	Only single colour	Eye catching with vast range of RAL shades	Innovative aesthetics
Durability Short term shelf life		Almost 4x service life as compare to conventional	Products can be available with Long duration warranty periods
Processing time	In house paint processing	Ready made product available	No paint shop required at all and its much easier to work with.



PPGI WITH 120 GSM OR PPGL 150 AZ

Means minimum 750 HRS SALT SPRAY RESULTS + AESTHETICS + DURABLITY + CORROSION RESISTANCE & MANY MORE without any price impact.

IT IS THE RIGHT TIME TO CONVERT VARIOUS APPLICATIONS FROM GI TO PPGI /PPGL

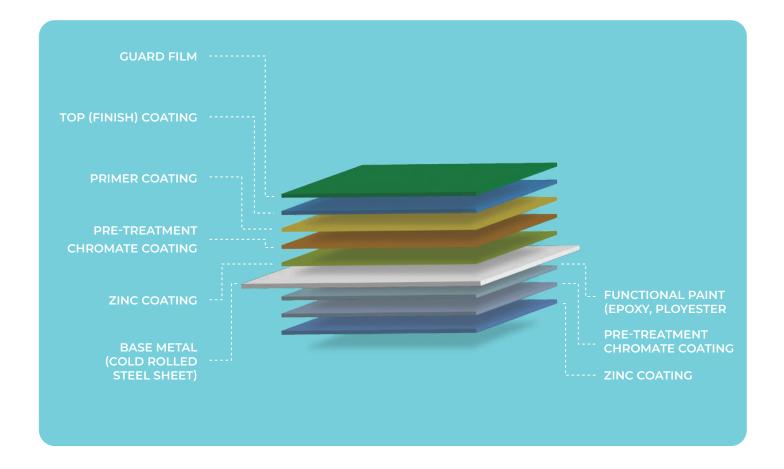
- PEB Sector never thought of making colour coated Purlin because this option was never available earlier.

 The existing Lines were not capable enough to produce these sizes
- The maximum thickness available was 1.2 MM in galvanized & 1.6 MM in Galvalume
- Apollo is now giving this option with world class Facility from its Raipur plant in width from 300 to 750
 MM and thickness from 0.3 to 3.00 MM
- The flexibility, high efficiency, and green benefits of coil coated metal are driving the demand for pre painted metal in many industries. Designs can be eye-appealing simple or complex, without compromising long-term durability, corrosion and mar resistance properties, and functionality



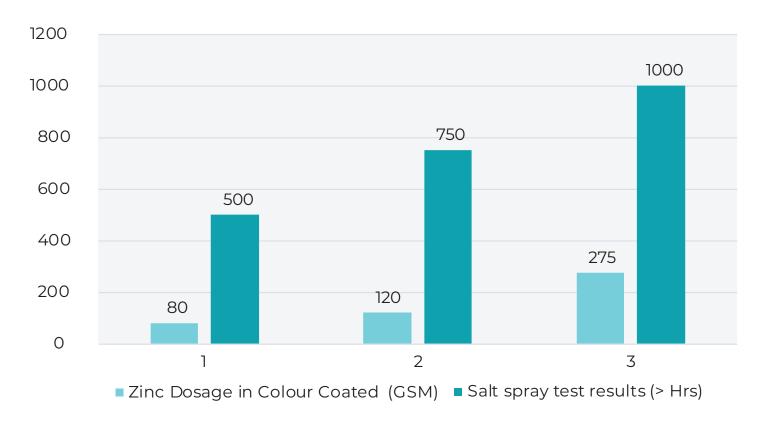
PURLIO WITH MULTI LAYERS OF PROTECTION IN COLOUR COATED

- Flux deposition not at all
- · Clean surface Because of degreasing and cleaning
- Pre treatment Give double protection on top of Zinc
- Primer layer Give additional protection on top of PT
- Top Coat layer Give additional protection on top of Primer
- · Multiple Layers of protection ensures that rust can not occur during punching or any other bending acts



ZINC CONSUMPTION ON PPGI VS. CORROSION RESULTS

Zinc Consumption in colour Coated Vs. Salt Spray result



Do You Know?

High thickness of zinc coating doesn't guarantee better corrosion resistance always; rather the thicker layer sometimes solidify and get cracked-these cracks give warm welcome to rust.

CERTIFICATION



& steel's testing laboratory

APPROVED BY (ISO 9901-2015, ISO 134061:2015 ISO 1 18003; 2007 CERTIFY LAB)

Approved by Govt of India

TEST REPORT

Salt spear (staining text).

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NABL ACCREDITED AN ISO 9001:2015 CERTIFIED LABORATORY

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Salt Spray Details

(a) Selt spray" for only chromated GI (No paint)

5120 GOM - It should provers red rule for 100 line, however surrel white rule is Wally to be freez.

127% GSM - It should pass 300 year, however some white rule is likely to be there

(it) Suit apray" for 136 GSM proy with 13 respons Topicial on 6 reconst Printer with 6 microne Dank cost

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(c) Balt spray? for 126 GSM Zinc with 15 microra Topocal on 7 microra Primer with 6 minimum Shock cost (more set) common proprietty

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VISUAL APPEAL MEETS BUDGET: Colored Purlins, the Smarter Solution

60m	Unit price	Amount					
Area 100068 SQF					price with colour	Cost difference	
Item	BOQ	Unit Price	Amount	coated	coated purlin		
Super Steel Structure							
Main Structural Steel	177120 KG	100	1,77,12,036	100.00	1,77,12,036		
Cold form Z section (Purlin & Girts)	42203 KG	70	29,54,231	75.00	31,65,247		
Hot rolled (Cleats, Sag rod, cage ladder etc)	15941 KG	100	15,94,083	100.00	15,94,083		
Anchor bolts	5882 KG	100	5,88,161	100.00	5,88,161		
Bolts	8470 KG	120	10,16,343	100.00	8,46,952		
Plates	31952 KG	100	31,95,163	100.00	31,95,163		
TOTAL =	281567 KG		2,70,60,016		2,71,01,642	0.2%	
Roof Sheet	9907 SQM	478.85	47,44,106	478.85	47,44,106		
Wall sheet	4583 SQM	478.85	21,94,570	478.85	21,94,570		
Gutter	341 M	612.928	2,09,008	612.928	2,09,008		
Downtake	1193 M	251.2	2,99,682	251.2	2,99,682		
			74,47,365		74,47,365		
Total cost difference			3,45,07,382		3,45,49,008	0.1%	
Note:- Quantity Tolerence ±3-5%							

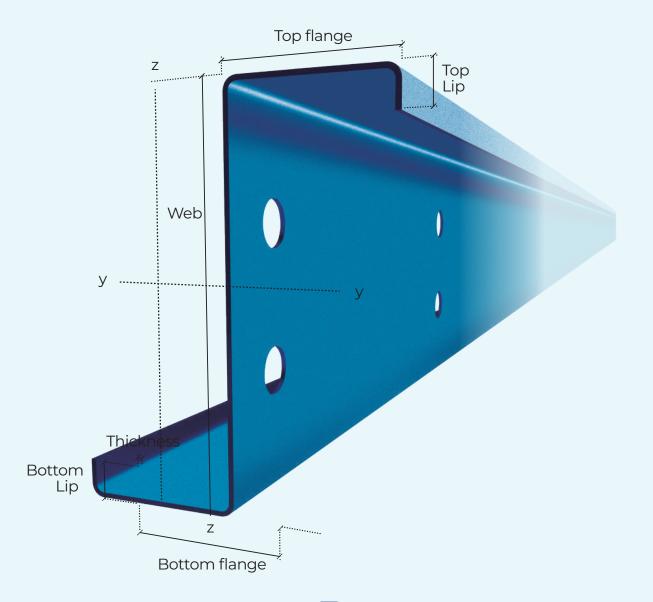


Invest 0.1% more for stunning aesthetics, unmatched durability, and a building that stands out.



Z PURLIN

These steel purlins are widely appreciated for their veracity and are extensively used in large sized roofing railway platforms, workshops, factory sheds, godowns and other industrial sheds. Z Purlins are stronger than C purlins and are most commonly used in joints and overlaps. These purlins are placed between the roofing sheet and structure and provide optimum support to the primary framing system. Z-purlins can be lapped, which is done by rotating one Z-purlin 180 degrees and having it fitted to another one.



TECHNICAL SPECIFICATIONS

	NARROW DIVISION CCL SHADE DEVELOPMENT SOP _14.12.2023										
Product	Top Colour	Primer DFT(µm)	Finish DFT(µm)	Total Top Coat DFT(µm)	Back Colour	Primer DFT(µm)	Back Finish Coat (µm)	Total Back Top Coat DFT(µm)	Top Gloss@60° (GU)	Back Gloss@60° (GU)	Top Paint Type
PURLIN	RAL 9002	4-5	14-15	18-20	RAL 9002	4-5	14-15	18-20	35±5	35±5	RMP
(top and bottom same	RAL 7038	4-5	14-15	18-20	RAL 7038	4-5	14-15	18-20	35±5	35±5	RMP
colour)	RAL 7035	4-5	14-15	18-20	RAL 7035	4-5	14-15	18-20	35±5	35±5	RMP

1. Thickness range 1.5 MM to 2.5 MM.

2. Galvanize Coating 80 GSM to 275 GSM as per requirement.

3. Regular colors are Ral 9002/7035/7038 both sides.

MATERIAL SPECIFICATION

Material thickness: 1.5mm-2.5mm

Steel Grade: G350-2

Yield Stress: (350MPa - 430MPa)

Coating mass: Z80/Z120/Z180/Z275

TO	LERANCES	

The following tolerances apply to Z-Purlin

Depth, D : ±1mm

Flange Width, F : ±3mm

Length : ±3mm

Hole centres : ±1.5mm

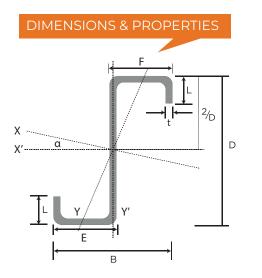
Lip, L : ±3mm

Thickness, T : ±8%

RECOMMENDED HOLE, CLETS AND FASTENING DETAILS

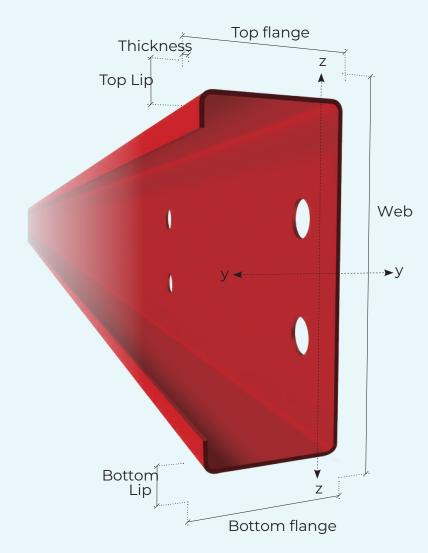
Standard THI Z-sections are supplied with optional holes punched to order. Punched Z-section can be supplied with H14, H16, H18 or elongated holes, with recommended cleat size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T min (mm)
100	50	35	110	6
125	50	45	120	6
150	80	45	150	6
200	110	55	190	6
250	150	60	235	8
300	200	60	285	10



C PURLIN

As the name itself suggests, these purlins bear shape like alphabet C. They are commonly used to support walls and floors. C purlins are also sometimes referred to as channel section purlins when they have flange stiffeners and U-sections when they do not. C-sections are those which are monosymmetrical. These sections cannot be lapped, but the stable shape ensures easy packaging and transportation. The C-section purlins are widely used in clear span design due to their high stability factor.



ENSURING CORROSION PROTECTION

A zinc coating of Z80/Z120/Z275 galvanised sheet combined with 36 micron paint is the standard coating class provided with APL APOLLO PURLIO Coils. This will provide a long and trouble free life for enclosed buildings and open sided rural buildings, in a non-aggressive environment. (A non aggressive environment is 1000m from rough surf, 750m from industrial emission and fossil fuel combustion and 300m for calm salt waters)

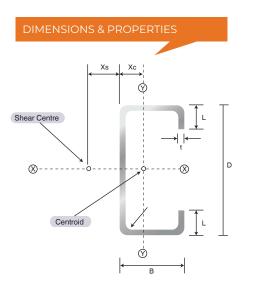
COMPATIBILITY WITH OTHER STEEL PRODUCTS

The coating on purlin is fully compatible with the zinc and aluminium/zinc coatings used on roof and wall sheeting. If minor damage occurs to the purlin coating, the base steel is protected by its own surrounding coating. Furthermore, the protective coating on the sheeting is not corroded by an un-protected base steel nearby.

RECOMMENDED HOLE, CLETS AND FASTENING DETAILS

Standard THI C-sections are supplied with optional holes punched to order. Punched C-section can be supplied with H14, H16, H18 or elongated holes, with recommended cleat size as stated in table below.

SECTION DEPTH (mm)	A (mm)	B (mm)	C (mm)	T min (mm)
100	50	35	110	6
125	50	45	120	6
150	80	45	150	6
200	110	55	190	6
250	150	60	235	8
300	200	60	285	10



MATERIAL SPECIFICATION

Material thickness: 1.5mm-2.5mm

Steel grade: G350-2

Yield Stress: (350MPa - 430MPa)

Coating mass: Z80/Z120/Z180/Z275

TOLERANCES

The following tolerances apply to C-Purlin

Depth, D: ±1mm

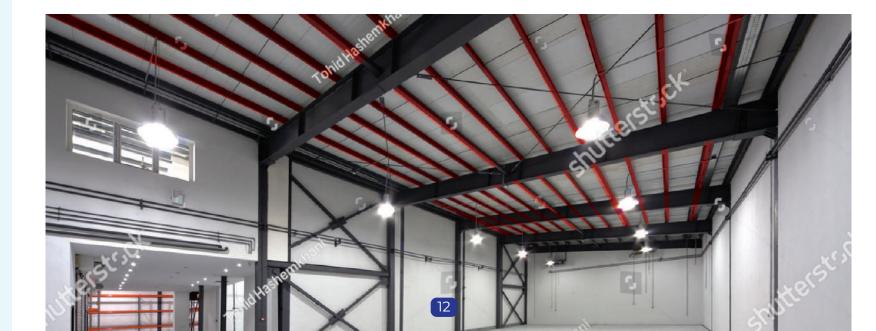
Flange Width, F: ±3mm

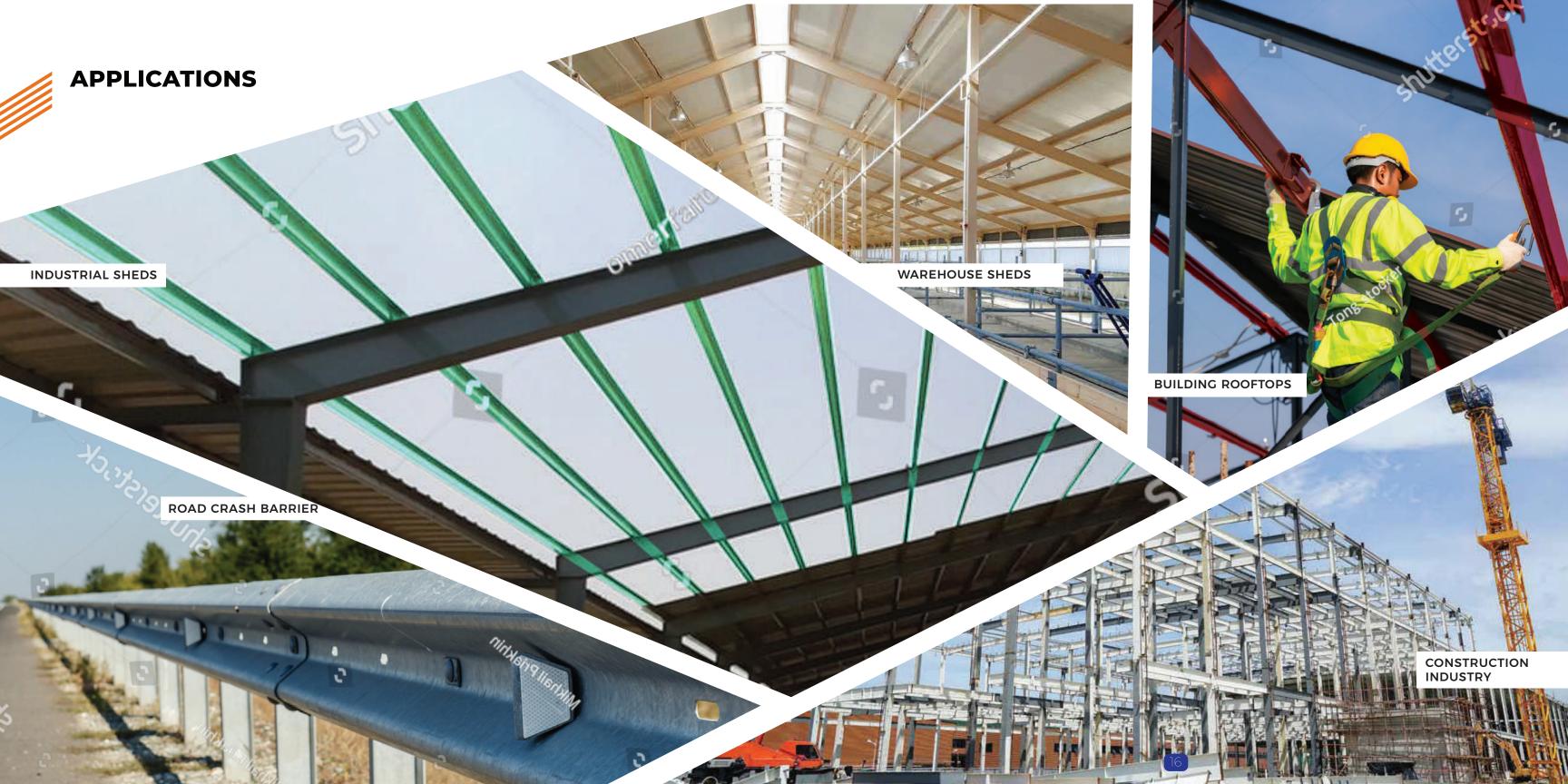
Length : ±3mm

Hole centres : ±1.5mm

Lip, L : ±3mm

Thickness, T: ±8%





ENVIRONMENT At APL Apollo, we are committed to taking care of the environment by implementing several measures for a better and cleaner tomorrow, while ensuring that the entire process is energy efficient. Our Zero Discharge sustainable policy makes sure that all water used in the production process is treated and reused. This reduces industrial water wastage drastically. We have planted trees in and around our premises and we've converted barren lands into green pastures.



OUR PRESENCE

