



AM/NS INDIA

Optigal[®]

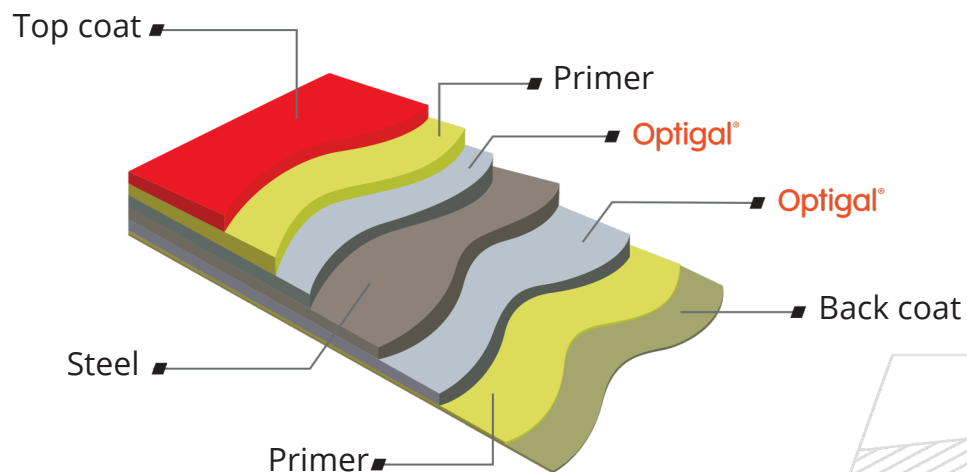
PREMIUM COLOUR COATED STEEL

ABOUT AM/NSINDIA

AM/NS INDIA is the joint venture between ArcelorMittal and Nippon Steel – two of the world's leading steel companies. As an integrated steel manufacturer with iron-making, steel-making and downstream facilities spread across India, we produce over 600 varieties of steel for a range of applications across industries. Our goal is to create smarter, more sustainable steels for India that empower its growth trajectory and enable brighter futures for all.

WHAT IS Optigal® TECHNOLOGY?

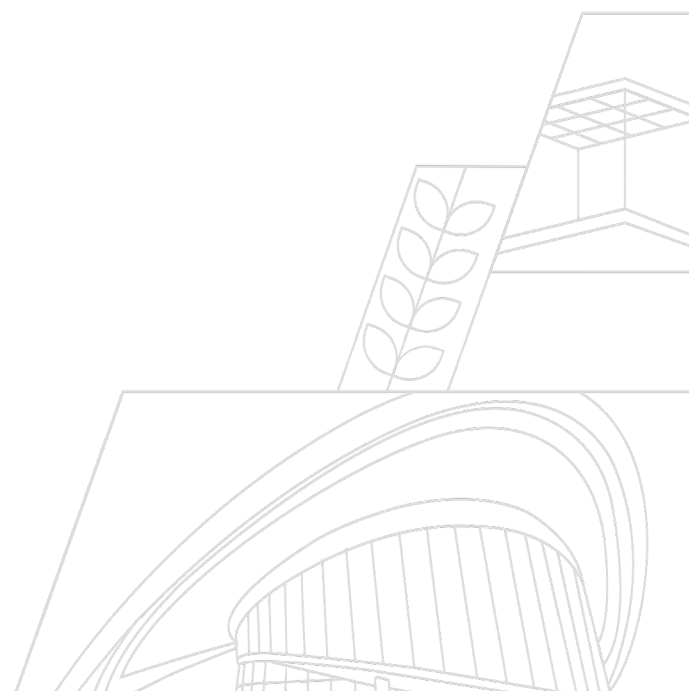
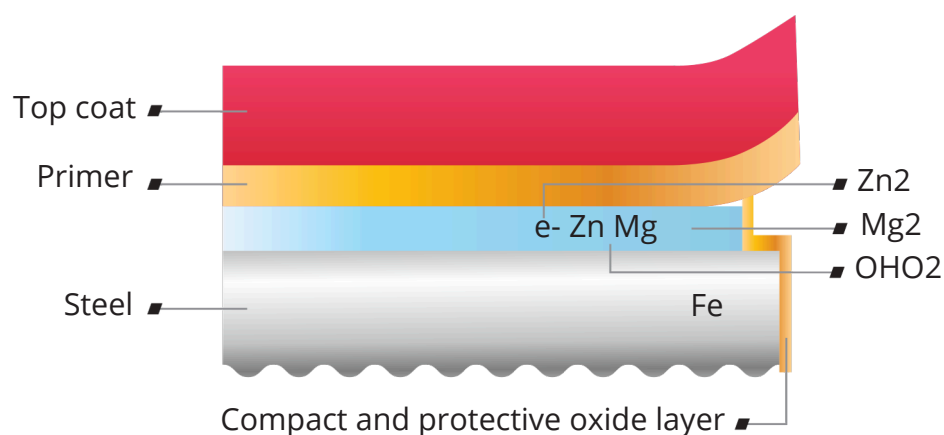
Optigal® is an innovative **zinc-aluminium-magnesium** alloy-based substrate technology, patented by ArcelorMittal Europe. Engineered for the next generation of high-performance, colour-coated steels, Optigal® optimises the alloy substrate and bonded paint layers to deliver superior cohesion, formability, and premium corrosion protection for construction products.



WHY CHOOSE **Optigal®** TECHNOLOGY?

Superior corrosion resistance

Optigal® technology offers one of the highest corrosion resistances in its class. Its advanced substrate formulation and bonded coating is exceptionally robust against points of corrosion ingress due to heat, cold, moisture and saline conditions. This ensures lasting protection in demanding climates, locations or geological conditions across India.





Exceptional 'Cut Edge' protection

Colour-coated steel with Optigal® technology delivers exceptional cut-edge protection performance. It forms a highly compact and stable protective layer at an early stage, leading to a much lower paint delamination on edges and scratches with a performance that is at least 3x better than conventional coatings.

Optigal/ZM120



PPGI/Z275



PPGL/AZ150



Salt Spray Test DIN EN ISO 9227, 2000h, on 25µ colour coated steel





Real world tests for real world assurance

Optigal® substrate technology has been tested for over 10 years in various environments (C3 rural, C5 marine) and results confirm its excellent behavioral characteristics.

Optimised flexibility

The highly resistant, adherent metallic layer of specially designed Optigal® coating is processable in terms of bending, roll forming, profiling, and other work processes, without developing any cracks on the bends.

Tested and certified in India and abroad

Optigal® technology has been approved by independent European certification bodies, like CSTB (Centre Scientifique et Technique du Bâtiment), DIBT (Deutsches Institut für Bautechnik) and ITB (Instytut Techniki Budowlanej) Pre-painted Zinc Aluminium Magnesium alloy coating has been Gazetted and Published as IS 19210 in India by Bureau of Indian Standards.



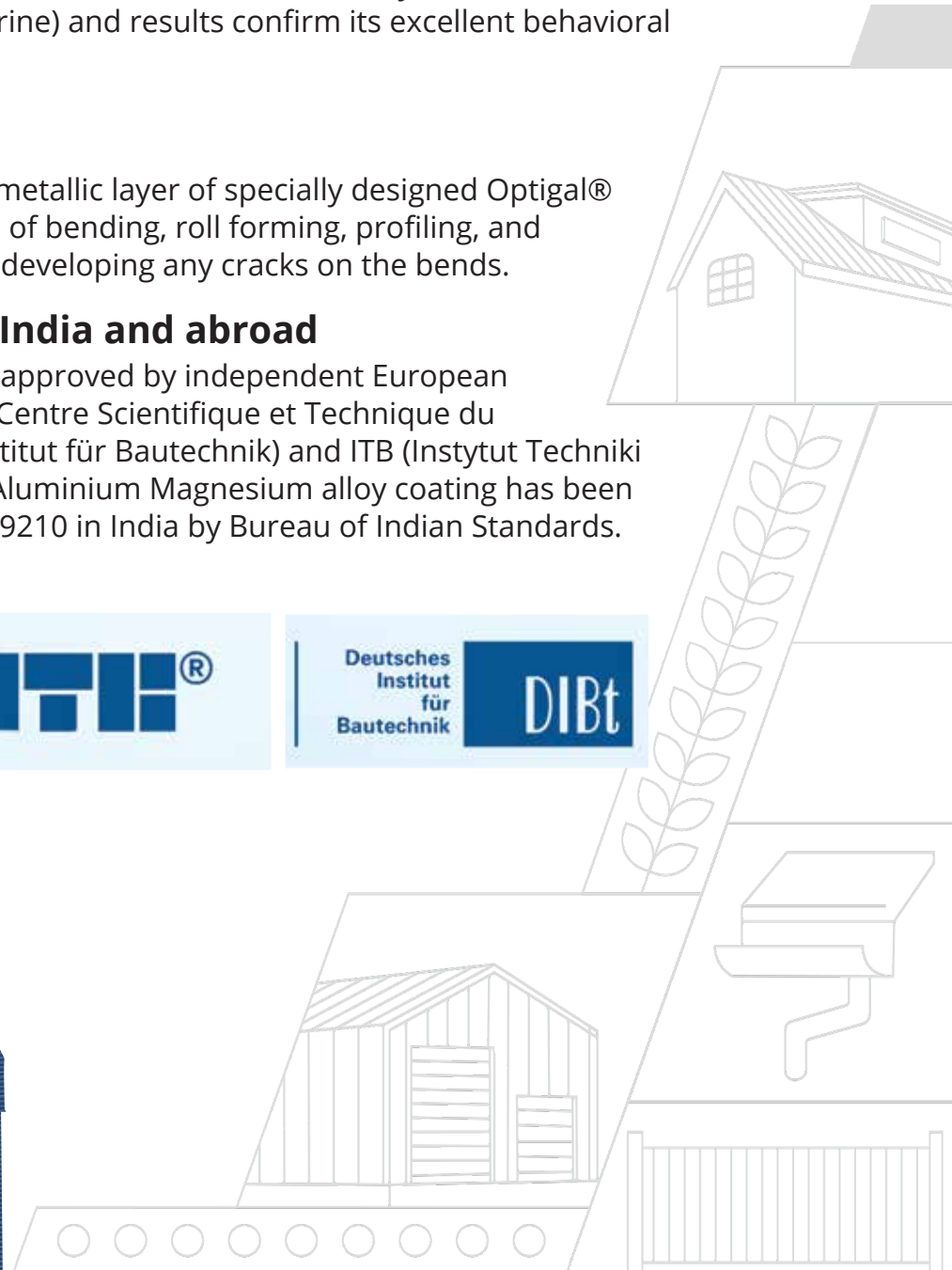
CSTB



ITB®



Deutsches
Institut
für
Bautechnik
DIBT



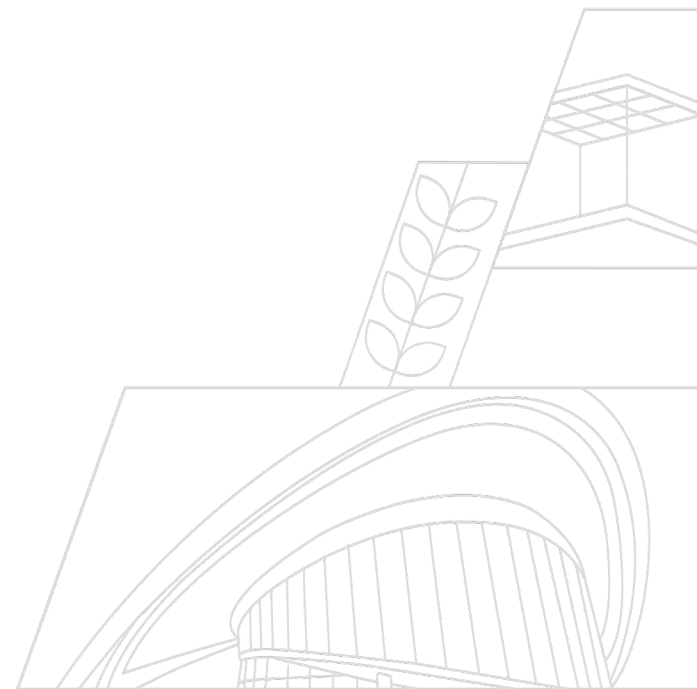
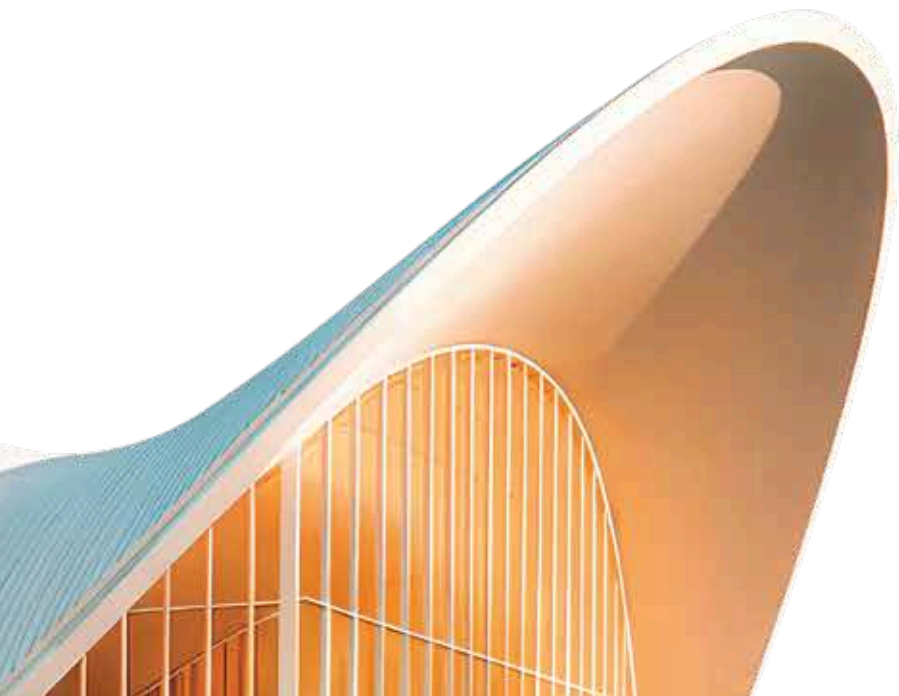


INTRODUCING THE Optigal® RANGE OF PREMIUM COLOUR COATED STEEL SOLUTIONS.

World-renowned Optigal® technology is now available in a tiered range of protection levels - standard, moderate, and high-performance - through its multiple variants.

These include Optigal® Prime, designed for balanced protection for moderate conditions, and Optigal® Pinnacle, the highest-performing variant even in hostile environments. Each variant combines high-quality steel with a patented corrosion-resistant **Zinc-Aluminium- Magnesium** alloy and a wide selection of premium colour coatings to meet specific construction compliance parameters.

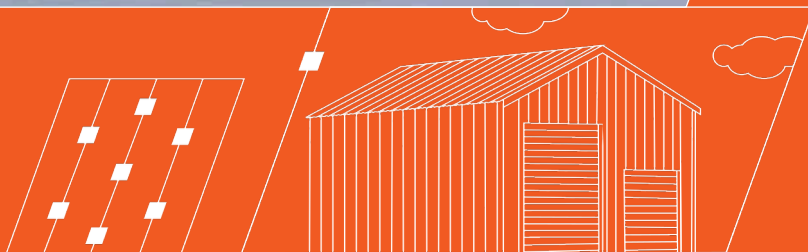
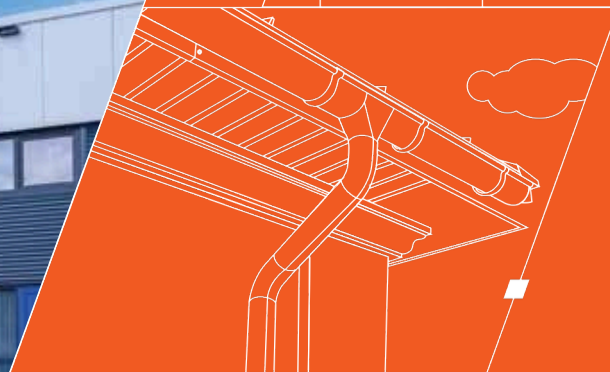
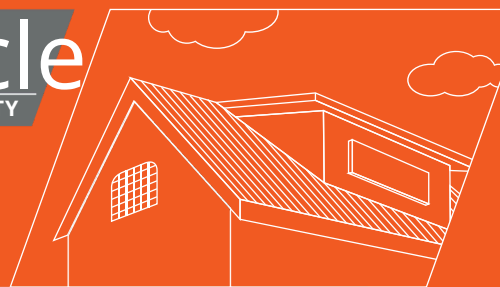
From coastal zones to arid regions, the Optigal® solution range delivers long-lasting durability and visual appeal in highly demanding environments. The advanced coating system is also tested to globally recognised UV standards, ensuring dependable performance under intense Indian solar and thermal exposure.





Optigal[®] Pinnacle

UP TO 25 YEARS WARRANTY





Optigal® Pinnacle

UP TO 25 YEARS WARRANTY

As the peak performer in the Optigal® range, **Optigal® Pinnacle** is engineered to defy the elements and deliver superior durability in the most challenging environments. Backed by up to 25 year warranty, it offers exceptional corrosion resistance and long-term protection for high value construction applications. With its advanced paint systems, including Cool Roof finishes, **Optigal® Pinnacle** enhances energy efficiency and material longevity, setting a higher standard for aesthetics, performance and durability in premium construction projects.

ADVANTAGES OF Optigal® Pinnacle

Assured longevity for up to 25 years



Backed by a 25-year warranty, **Optigal® Pinnacle** represents the highest level of protection in the **Optigal®** range. Developed for the most demanding environmental conditions and highly durable applications, it ensures long-term structural integrity and surface performance.

Advanced Paint and Coating System



Optigal® Pinnacle is engineered with a high-performance PU/PA (Polyurethane/Polyamide) coating that delivers superior resistance to moisture, UV radiation, and temperature variation. This system enhances surface durability and extends the lifecycle of colour-coated steel in harsh climates. Its formulation includes light-stable pigments and UV-absorbing additives that help retain colour and finish over time, ensuring enduring aesthetic value, even under prolonged sun exposure.

Engineered for up to C5 Environments



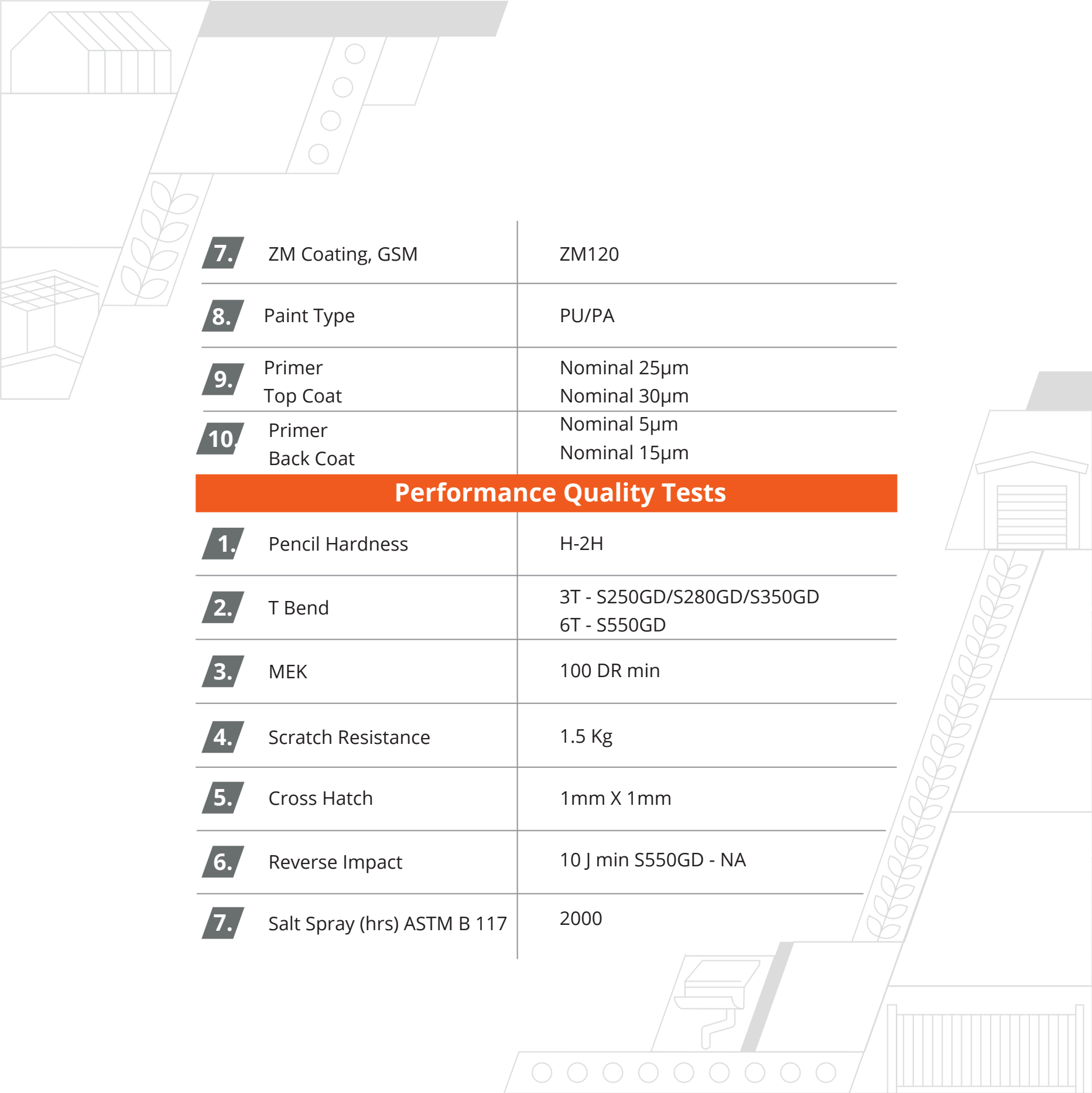
Optigal® Pinnacle delivers high-level protection tailored to C5 environments in urban, industrial, or seafront zones characterised by high pollution or salt-laden air.



Optigal[®] Pinnacle[®] SPECIFICATIONS

UP TO 25 YEARS WARRANTY

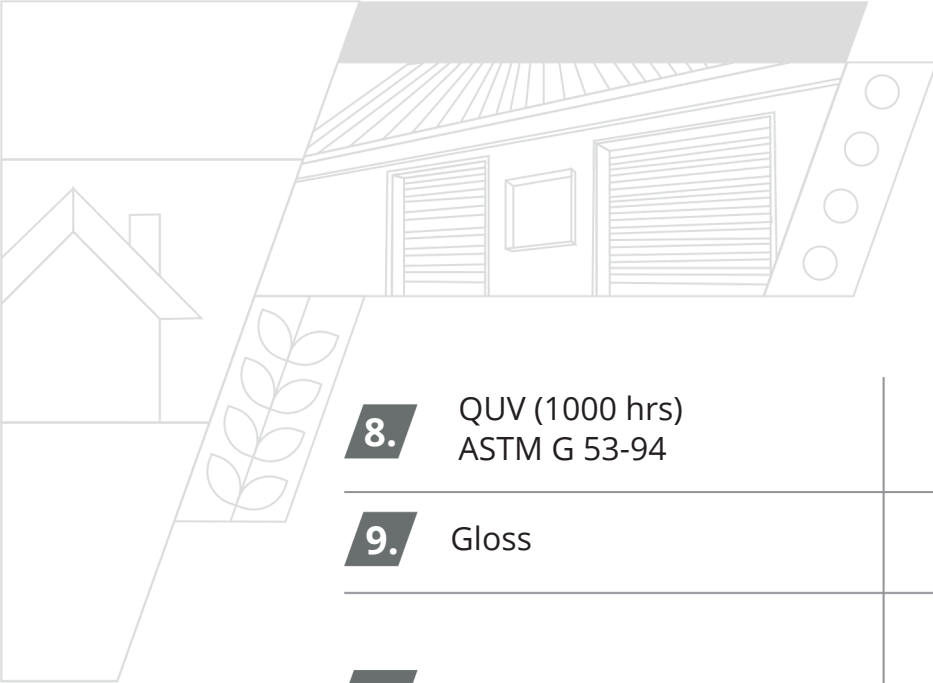
Sr No.	Properties	Availability Details
Material Parameters		
1.	Base Metal Equivalent Specification	EN 10346 (Zn-Mg-Al alloy coating)
2.	Colour Coating Equivalent Specification	EN 10169
3.	Grade & Thickness	S250GD/ S280GD : 0.40 - 0.80 mm S320GD/ S350GD : 0.40 - 0.70 mm S550GD : 0.45 - 0.60 mm
4.	Thickness Tolerance	0.40 < 0.60 : +/-0.025 mm 0.60 ≤ 0.80 : +/-0.03 mm For S550GD, 0.60mm: +0 /-0.050mm
5.	Width Range	1000 - 1250 mm
6.	Width Tolerance	+6/-0 mm



7.	ZM Coating, GSM	ZM120
8.	Paint Type	PU/PA
9.	Primer Top Coat	Nominal 25µm Nominal 30µm
10.	Primer Back Coat	Nominal 5µm Nominal 15µm

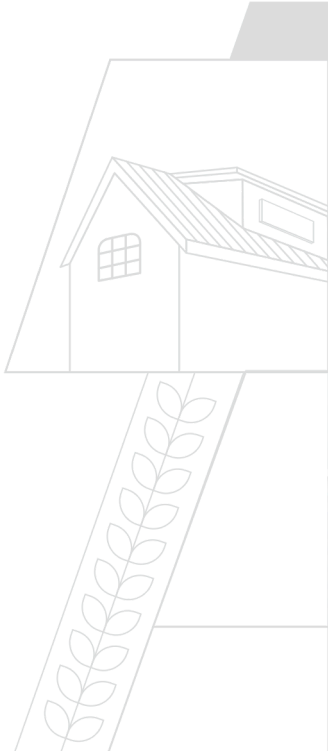
Performance Quality Tests

1.	Pencil Hardness	H-2H
2.	T Bend	3T - S250GD/S280GD/S350GD 6T - S550GD
3.	MEK	100 DR min
4.	Scratch Resistance	1.5 Kg
5.	Cross Hatch	1mm X 1mm
6.	Reverse Impact	10 J min S550GD - NA
7.	Salt Spray (hrs) ASTM B 117	2000

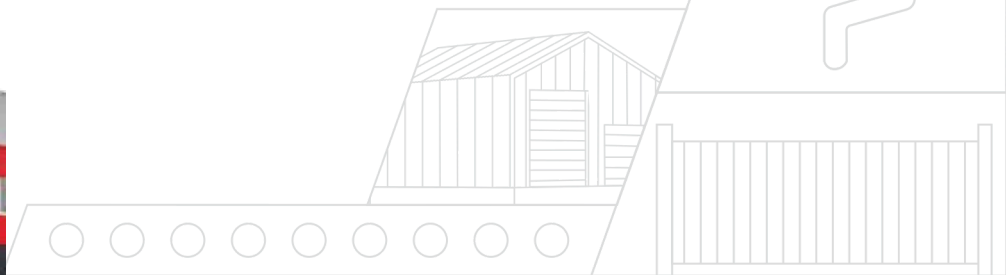


8.	QUV (1000 hrs) ASTM G 53-94	DE - 5 max Gloss Retention - 40%min
9.	Gloss	30 - 60 GU or as per sample
10.	Delta E	(Against approved sample) < 1.0 for Light Shade & <1.5 for dark Shade NA for metallic and wrinkle shades

Marking & Packaging



1.	Guard Film (optional)	As per order (50µm min)
2.	Packing	Standard metal packing
3.	Coil weight	1.5 - 10MT For with Guard Film 3.5MT max
4.	Liner Marking	Sandwich liner marking (As per order)
5.	ID Sleeve	Up to 7.5MT coil wt- 5 mm CB Sleeve >7.5T- 15mm CB Sleeve







SIX PAINT VARIANTS. TAILORED FOR PERFORMANCE.

Optigal® is available in six special paint variants engineered to meet specific end-use performance requirements across a broad spectrum of industries and environments. supports long-term cleanliness and material integrity, especially in humid conditions.

High gloss finish



This variant provides a smooth, reflective finish that enhances visual appeal while delivering robust weather resistance. Formulated with high-performance paint systems such as PU/PA, SDP, PVDF, it offers excellent resistance to UV exposure and colour fading. High gloss coatings are well suited for commercial and residential projects where aesthetics are a priority.

Anti-dust surface

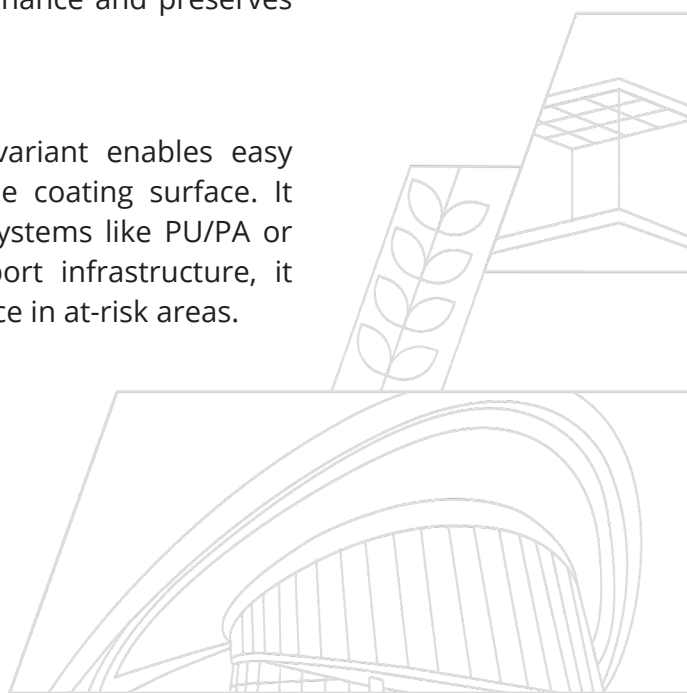


Designed to resist dust accumulation, this variant features a low-friction surface that repels airborne particles, helping roofs remain cleaner for longer. Preferred for use in dusty or pollution-prone environment such as warehouses, agricultural facilities, and urban infrastructure, it reduces the need for maintenance and preserves functional performance over time.

Anti-graffiti protection



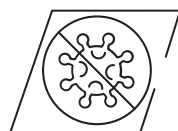
Formulated with non-stick properties, this variant enables easy removal of graffiti without compromising the coating surface. It resists paint and solvent penetration using systems like PU/PA or PVDF. Ideal for public buildings and transport infrastructure, it helps maintain a clean, professional appearance in at-risk areas.





Anti-static capability

This variant integrates conductive additives to minimise the build-up of static electricity, helping reduce dust attraction and the risk of electrical discharge. It is particularly well suited for data centres, electronics manufacturing units, and facilities handling flammable materials where static control is critical to operational safety.



Anti-microbial defence

Designed to resist dust accumulation, this variant features a low-friction surface that repels airborne particles, helping roofs remain cleaner for longer. Preferred for use in dusty or pollution-prone environments such as warehouses, agricultural facilities, and urban infrastructure, it reduces the need for maintenance and preserves functional performance over time.

Paint Variant	PU/PA	SDP	PVDF
High Gloss	Smooth, Vibrant Finish, UV- resistant	Cost-effective glossy coating	Superior gloss, colour retention
Anti-Dust	Low - friction, dust-repelling surface Non - Stick,	Slick surface, moderate durability Moderate protection,	Inert, smooth, long-lasting Chemical - resistant,
Anti-Graffiti	solvent - resistant Conductive additives,	cost- effective Budget- friendly static	easy - clean Stable, high - tech
Anti-Static	flexible Antimicrobial agents,	control Cost- effective hygiene	static dissipation Long - term microbial
Anti-Microbial	durable Reflective,	solution Reflective, durable for	resistance High SRI, premium
Cool Roof	energy - efficient	construction	energy savings



SMARTER THERMAL EFFICIENCY WITH COOL ROOF TECHNOLOGY

Optigal® features Cool Roof Technology engineered to reflect solar radiation and to reflect heat, creating a significant thermal gradient between top and bottom surface of the roof. This translates to measurable energy savings and improved thermal comfort for both occupants and equipment.

With high Solar Reflectance Index (SRI) values, **Optigal®** coatings meet IGBC and LEED standards, achieving minimum SRI scores of 78 for low-slope and 29 for steep-slope roofs. Ideal for commercial, industrial, and residential applications, these coatings reduce HVAC load, improve working conditions, and support sustainability by helping to mitigate urban heat island effects.

Optigal® coats Solar Reflectance Index (SRI) values

Available in multiple RAL shades, **Optigal®** coatings deliver a range of SRI values for improved solar reflectivity and thermal efficiency.

Colour	SRI value	RAL Code
Signal White	85	9003
Pure White	83	9010
Grey White	79	9002
Light Ivory	75	1015
Light Grey	68	7035
Light Blue	45	5012
TeleGrey 1	40	7045
Sky Blue	38	5015
Slate Grey	28	7015
Pine Green	27	6028
Carmine Red	25	3002



GREENPRO CERTIFIED FOR A GREENER TOMORROW

Optigal® leads a new generation of high-performance metallic coatings designed with sustainability at their core. As a GreenPro Ecolabel certified technology, Optigal® meets rigorous environmental standards across its entire life cycle, making it a responsible choice for modern, environmentally conscious construction.

Optigal® Prime and Optigal Pinnacle advanced paint systems are formulated with low levels of volatile organic compounds (VOC) and are free from harmful heavy metals such as lead, mercury, and cadmium. In addition, all Optigal® variants are fully recyclable, reusable, and relocatable, supporting circular economy goals and reducing long-term environmental impact.

LINER MARKING

Liner Marking will appear as:

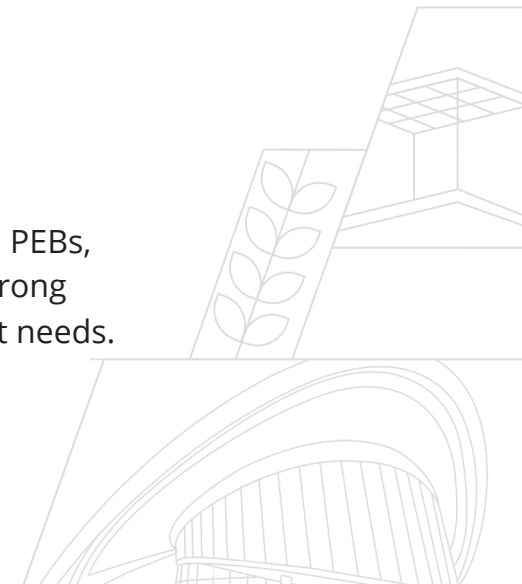
Company name Product logo ZM Coating_Manufacturing month/year plant initial_Thickness mm TCT

For Example:

AM/NS INIDA_OPTIGAL®PINNACLE_ZM120_4/25_P_0.50mmTCT

Optigal® APPLICATIONS

Optigal® is ideal for a wide variety of projects like aesthetic roofing, PEBs, large warehouses, sandwich panels and custom profiles. It offers strong corrosion resistance and lasting performance across diverse project needs.





APPLICATIONS BY ELEMENTS

♦ Roofs

- ♦ Flat or pitched roof
- Insulated panels
- Built-up roof systems
- Roof profiles

♦ Walls and facades

- Wall insulated panels
- Built-up systems
- Wall profiles
- Creative facades



Roofing



Guttering & Fascia



Garage Doors



Walling



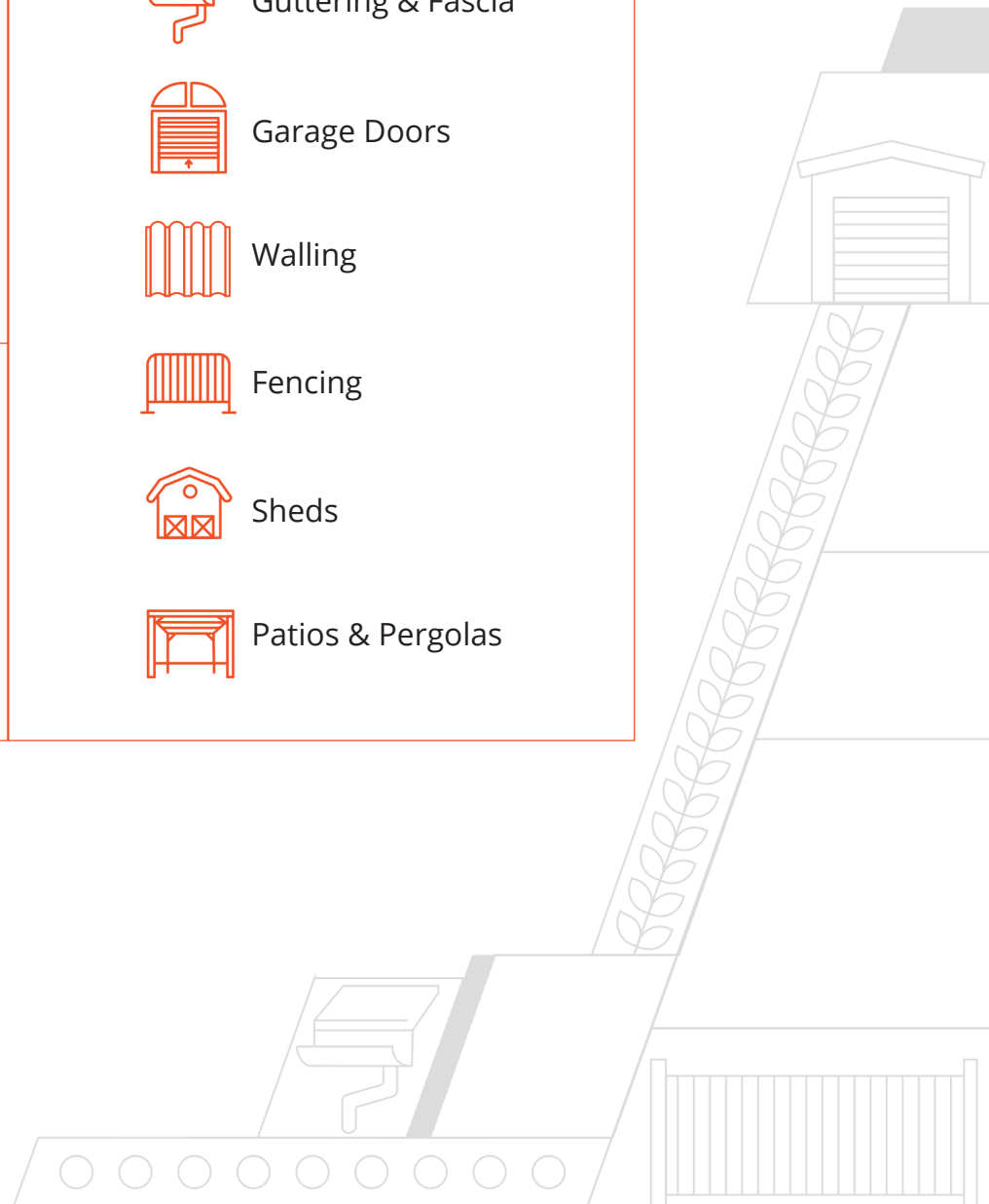
Fencing



Sheds



Patios & Pergolas



APPLICATION BY SEGMENTS



Cold Storage

Get high precision to ensure air-tight conditions for enhanced performance and durability against high external thermal factors such as solar heat.



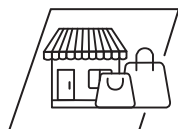
Industrial and logistics

Enhance the functionality and looks of industrial and logistics spaces - especially those that require extreme weather resistance and high-bay construction.



Agriculture

The UV absorb, solar heat reflective and thermal reduction capabilities of roof and panels enhance agriculture based operations with reduced HVAC energy costs and enhanced protection for equipment, food-grain, personnel and livestock.



Retail spaces

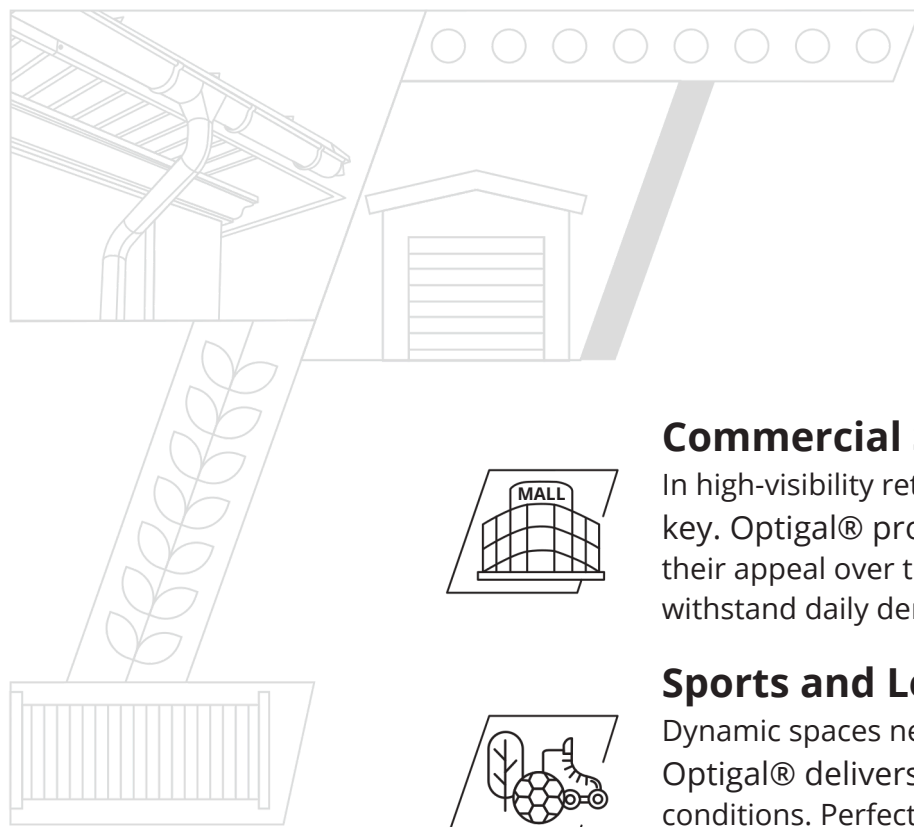
Create remarkable and visually striking retail structures with the enduring strength of Optigal®. Its exceptional durability ensures long-lasting perform while supporting sustainable design goals. Whatever the colour, size or cost efficiency your retail project requires, Optigal® can deliver a distinctive advantage.



Car Parks

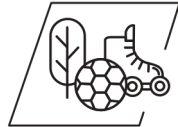
For frequently used structures like car parks, ease of construction and durability matters. Optigal® offers roofing facade and profile sheets that deliver lasting performance in every detail.





Commercial Spaces

In high-visibility retail and business hubs, both form and function are key. Optigal® provides durable, colour-rich solutions that maintain their appeal over time. Ideal for facades, roofing and profiles that withstand daily demands.



Sports and Leisure

Dynamic spaces need materials that can perform under pressure. Optigal® delivers corrosion resistance and visual consistency in all conditions. Perfect for arenas, stadiums, leisure and recreational facilities.



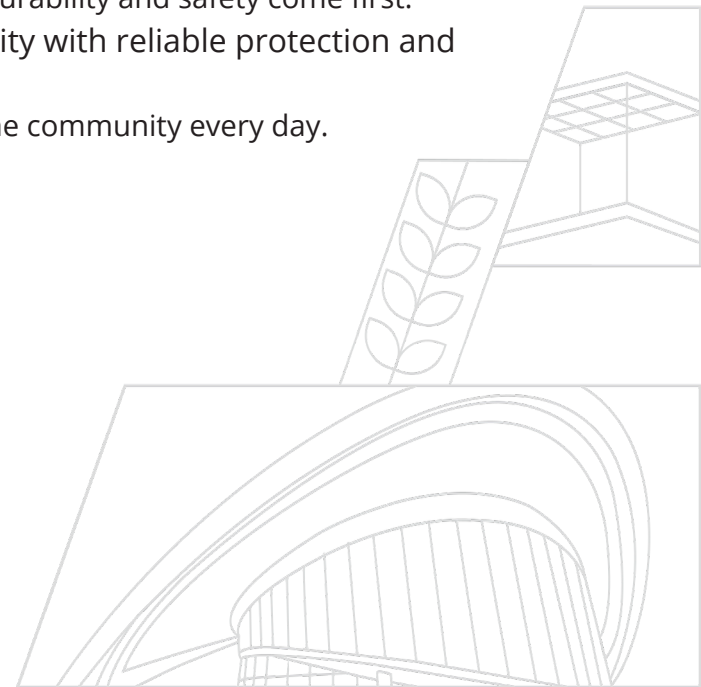
Office buildings

Modern workspaces call for smart, sustainable construction. Optigal® offers long-lasting finishes and energy-efficient options like cool roofs, for a comfortable and efficient office environment.



Public Infrastructure






From transit hubs to civic buildings, durability and safety come first. Optigal® ensures structural integrity with reliable protection and low maintenance, for spaces that serve the community every day.





**SMARTER
STEELS
BRIGHTER
FUTURES**

**AM/NS
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 <http://www.amns.in/products/colour-coated-steel/optigal>

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