AM/NS INDIA

Optigal®

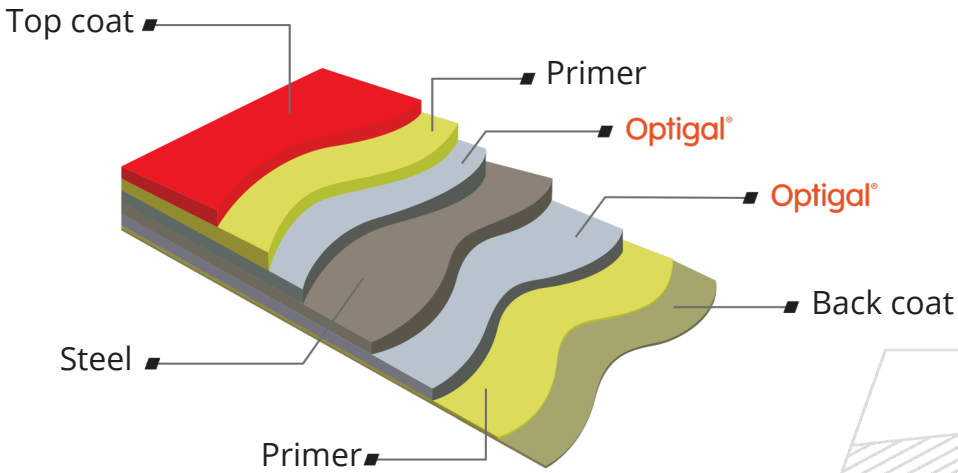
PREMIUM COLOUR COATED STEEL

ABOUT AM/NS INDIA

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?

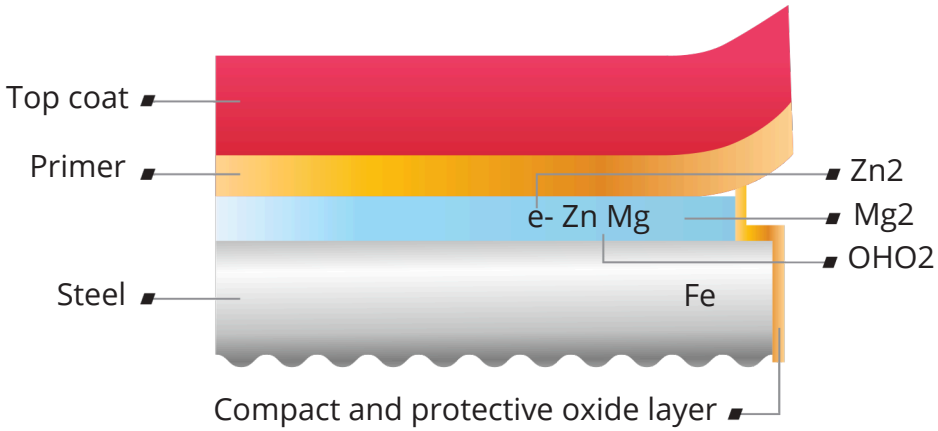
Optigal® is an innovative zinc-aluminium-magnesium alloy-based substrate technology, patented by ArcelorMittal Europe. Engineered for the next generation of high-performance, colour-coated steels, Optigal® optimises the alloy substrate and bonded paint layers to deliver superior cohesion, formability,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



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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

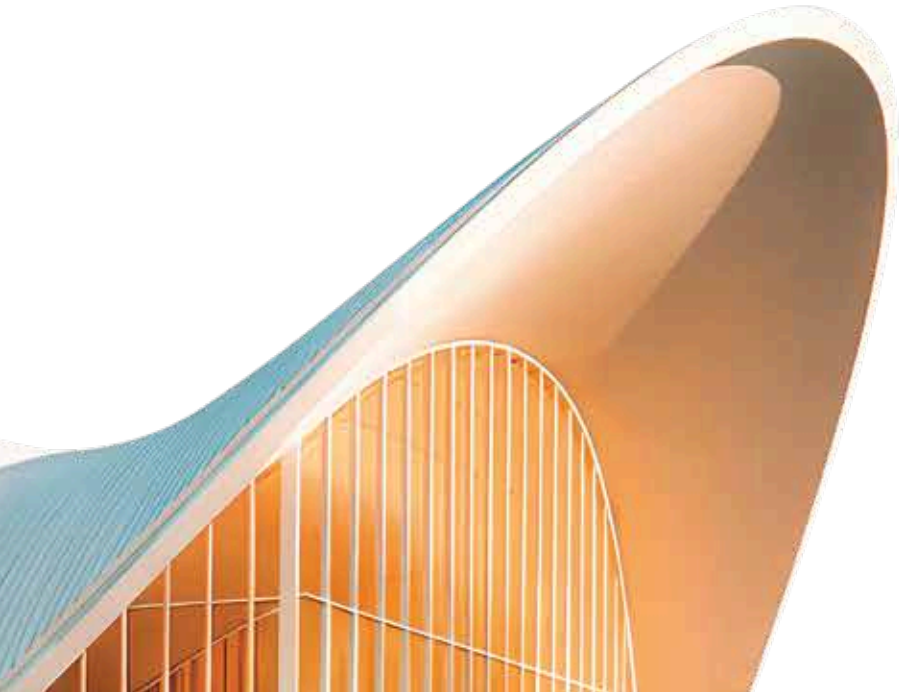
Optigal® technology has been approved by independent European certification bodies, like CSTB (Centre Scientifique et Technique du Bâtiment), DIBT (Deutsches Institut für Bautechnik) and ITB (Instytut Techniki Budowlanej) Pre-painted Zinc Aluminium Magnesium alloy coating has been Gazetted and Published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

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.

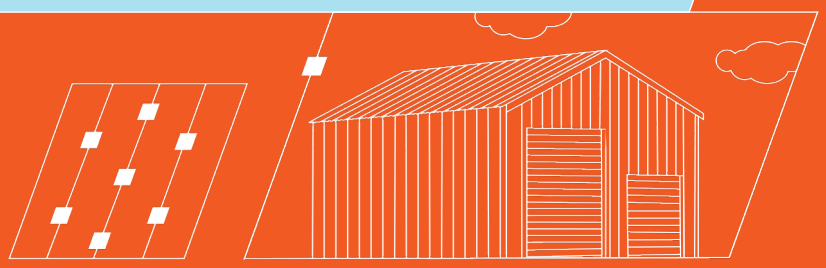
These include Optigal® Prime, designed for balanced protection for moderate conditions, and Optigal® Pinnacle, the highest-performing variant even in hostile environments. Each variant combines high-quality steel with a patented corrosion-resistant Zinc-Aluminium- Magnesium alloy and a wide selection 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® Prime

15-YEAR WARRANTY



www.amns.in/products/optigal-prime

Optigal® Prime
15-YEAR WARRANTY

An optimised variant in the Optigal® technology range, Optigal® Prime offers high protection and performance in premium colour coated steel. Engineered even for C3 environments, it provides reliable corrosion resistance backed by a 15-year warranty. Optigal® Prime is well-suited for projects that require essential protection for Indian climatic and operational conditions.

ADVANTAGES OF Optigal® Prime

Assured longevity for 15 years*

Backed by a 15 year warranty, **Optigal® Prime** offer an enduring protection that reflects the highstandards of colour-coated steel quality and reliability expected for premium Indian projects.

Advanced Paint and Coating

Optigal® Prime offers a range of tailored coating options to meet specific performance requirements, from the the extended weather resistance of Super Durable Polyester (SDP), and the premium finish of Polyvinylidene Fluoride (PVDF), known for its outstanding UV reflection and corrosion resistance.

Ideal for C3 environments

Optigal® Prime offers an optimised cost-to-protection solution for C3 environments, including urban, industrial, and seafront areas with moderate sulphur pollution or salt exposure. It provides robust corrosion protection for locations subject to moderately harsh conditions.

Optigal® Prime 15-YEAR WARRANTY SPECIFICATIONS

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	SDP/PVDF
9.	Primer - Nominal Top Coat - Nominal	5µm 20µm
10.	Primer - Nominal Back Coat - Nominal	5µm 6µm

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	1500

8.	QUV (1000 hrs) ASTM G 53-94	DE - 5 max Gloss Retention - 30%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

Note: Above paint properties refer to top coat only.

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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	Slick surface, moderate durability	Inert, smooth, long-lasting
Anti-Graffiti	Non - Stick, solvent - resistant	Moderate protection, cost- effective	Chemical - resistant, easy - clean
Anti-Static	Conductive additives, flexible	Budget- friendly static control	Stable, high - tech static dissipation
Anti-Microbial	Antimicrobial agents, durable	Cost- effective hygiene solution	Long - term microbial resistance
Cool Roof	Reflective, energy - efficient	Reflective, durable for construction	High SRI, premium 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

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http://www.amns.in/products/colour-coated-steel/optigal

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