

**AM/NS**  
**INDIA**

ArcelorMittal Nippon Steel India

**UNSEEN PRECISION.  
UNMATCHED SURFACE.**

**AM/NS** Optima

True Zero Spangle Galvanised 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.

### **OUR HAZIRA STEEL PLANT**

With a capacity of 10 Million Tonnes Per Annum (MTPA), the AM/NS India Hazira Steel Plant in Gujarat is an integrated, sophisticated and environment-friendly facility that is one of the largest single-location flat steel plants in the world.

The plant incorporates comprehensive support infrastructure that includes power, lime and oxygen plants, a township and a captive port that can accommodate capesize vessels. This modern operations and handling system enables self-sufficiency and global logistics.



### **CGL-4: INDIA'S MOST INTELLIGENT AND SUSTAINABLE GALVANIZING LINE**

AM/NS Optima is manufactured in AM/NS India's newly inaugurated, first-in-India, state-of-the-art Continuous Galvanising Line (CGL-4) at the Hazira plant. This facility is designed to produce smarter, higher-quality, and more sustainable steel to support India's industrial growth.

CGL-4 is India's most advanced galvanizing line, featuring the country's first fully automatic laser welding machine and robotics for precision and consistency. The line operates in a dust-free environment and uses automation (robots for data validation, dross removal, and zinc charging) to eliminate human error and ensure a perfect, uniform surface finish on every coil. It includes a global product qualification system that uses AI to predict and guarantee quality based on real-time process data, ensuring every order meets exact specifications.

**HIGH PRECISION FOR SUPERIOR STEEL SURFACE FINISHES.**

# **AM/NS** Optima

True Zero Spangle Galvanised Steel

AM/NS Optima, produced on the advanced CGL-4 at AM/NS Hazira, sets a new benchmark for precision and consistency in steel surface finishes. As one of India's most premium True Zero-spangle Galvanised Steels, it delivers a higher degree of surface uniformity and control compared with conventional zero-spangle steel, allowing manufacturers to achieve cleaner, more consistent finishes with confidence.

Built on precision-engineered substrates with uniform thickness and carefully controlled surface quality, AM/NS Optima bends predictably, provides visually harmonious finishes, and performs reliably across production runs. It enables manufacturers to produce superior surfaces suited for high-precision applications.

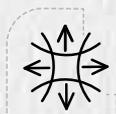


## WHY CHOOSE AM/NS OPTIMA?



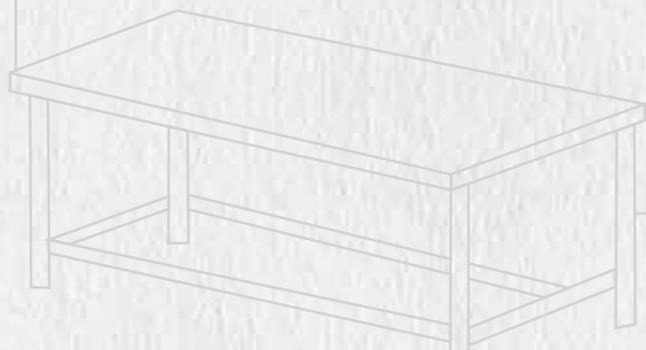
### **ADVANCED ZERO SPANGLE FINISHING TECHNOLOGY**

AM/NS Optima manufacturing uses advanced finishing technology, including a tandem cold rolling mill equipped with auto shape, control, four high skinpass mills and six high tension levellers in combination, to ensure best-in-class flatness tolerances and zero spangle finishing for better end-product manufacturing quality.



### **HIGHER CORROSION RESISTANCE EXTENDS END-PRODUCT LIFE**

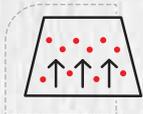
The zero-spangle attribute of AM/NS Optima, coupled with skin-passing and uniform zinc coating, ensures superior corrosion resistance and enhances end-product life-expectancy. The optimum chrome passivation is designed to deliver a superior resistance to white rust.





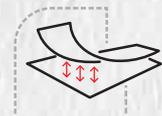
### **AESTHETICALLY BEAUTIFUL WHEN PURE STEEL NEEDS TO BE SEEN**

AM/NS OPTIMA delivers smoother, shiny finishes that are widely preferred in industries where the aesthetic beauty of visible steel is always on display, without the need for coatings or painting.



### **SUPERIOR DEGREE OF PLASTIC DEFORMATION FOR WORKABILITY**

To ensure that AM/NS Optima offers superior mechanical and structural quality, for end-product forming and working utilisation, stringent process control is maintained throughout the manufacturing cycle. This stringent quality control also ensures resilient zinc-coating adhesion during metalworking.



### **SUPERIOR PAINT ADHESION ACROSS AGGRESSIVE CONDITIONS**

AM/NS Optima with its true zero-spangled surface provides better adhesion substrate for end-products with painting requirements, compared to standard or suppressed spangled galvanised steel.

**LEAD-FREE FOR A SAFER, MORE ECO-FRIENDLY CHOICE**

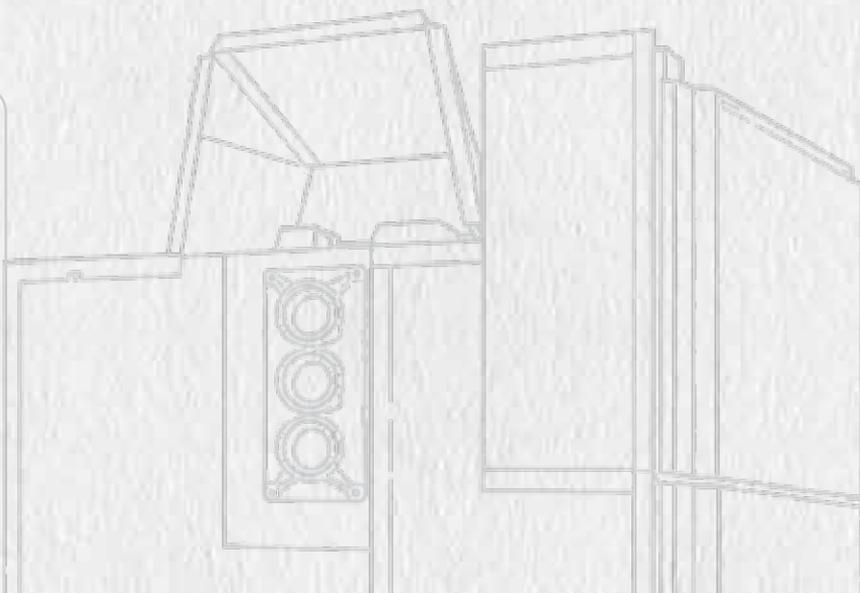
AM/NS Optima is manufactured lead-free making it RoHS compliant and a safer, more eco-friendly steel choice.

**STRONG TECHNICAL AND R&D SUPPORT**

Back by deep material expertise and application engineering to support design decisions, process optimisation, and long-term performance.

**TIGHT TOLERANCES FOR HIGH PRODUCTION EFFICIENCY**

AM/NS Optima is engineered for dimensional consistency that improves line stability, reduces rework, and supports efficient, cost-controlled manufacturing.



## SPECIFICATIONS

<b>Thickness</b>	0.4 - 3.2 mm
<b>Width</b>	750 - 1650 mm
<b>Coating</b>	up to 450 GSM*
<b>Standards</b>	IS277/ ASTM653/ JISG3302/ EN10346
<b>Steel Grade</b>	Forming grades – DQ, DDQ, EDD/IF Structural Grades – GP240 – GP550
<b>Surface Type</b>	Skin-pass
<b>Surface Treatment</b>	Chrome 3/ Chrome 6/ Chrome-free passivation/ oiled/ unoiled



## GRADES AND PROPERTIES

### CHEMICAL ANALYSIS

Designation	Grade	C Max	Mn Max	S Max	P Max	Ti Max
GP	Ordinary		0.25	1.70	0.045	
0.050	---					
GPL	Drawing (Lock Forming)		0.12	0.50	0.035	
0.040	---					
GPD	Deep Drawing	0.10	0.45	0.030	0.025	---
GPED	Extra Deep Drawing	0.08	0.40	0.030	0.020	---
GPIF	Interstitial Free (Stabilised)	0.06	0.25	0.020	0.020	0.15
GP230	Structural Steel Grade 230	0.20	1.35	0.040	0.040	---
GP250	Structural Steel Grade 250	0.20	1.35	0.040	0.050	---
GP275	Structural Steel Grade 275	0.25	1.35	0.040	0.050	---
GP300	Structural Steel Grade 300	0.25	1.35	0.040	0.050	---
GP350	Structural Steel Grade 350	0.25	1.35	0.040	0.050	---
CLASS-1	CLASS-2					
GP350	Structural Steel Grade 350	0.25	1.35	0.040	0.050	---
CLASS2	CLASS-2					
GP450	Structural Steel Grade 450	0.25	1.60	0.040	0.050	---
GP550	Structural Steel Grade 550	0.25	1.70	0.040	0.050	---

## MECHANICAL PROPERTIES

Designation	Quality Name	Yield Stress MPa	Tensile Strength MPa	Elongation, Percent A Min	
				L <sub>0</sub> =80mm	L <sub>0</sub> =50mm
GP	Ordinary		---	---	---
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GPL	Drawing (Lock Forming)	350 max	450 max	25	25
GPD	Deep Drawing	280 max	430 max	26	27
GPED	Extra Deep Drawing	260 max	430 max	28	31
GPIF	Interstitial Free (Stabilised)	240 max	370 max	34	36
GP230	Structural Steel Grade 230	230 min	310 min	18	20
GP250	Structural Steel Grade 250	250 min	360 min	18	20
GP275	Structural Steel Grade 275	275 min	380 min	18	20
GP300	Structural Steel Grade 300	300 min	400 min	18	20
GP350	Structural Steel Grade 350	350 min	420 min	12	13
CLASS-1	CLASS-1				
GP350	Structural Steel Grade 350	350 min	---	12	13
CLASS2	CLASS-2				
GP450	Structural Steel Grade 450	450 min	480 min	8	9
GP550	Structural Steel Grade 550	550 min	570 min	---	---

## APPLICATIONS



### MODULAR KITCHEN CABINETS

Smooth zero-spangle finish,  
excellent paint adhesion,  
corrosion resistance

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Thickness: 0.40 - 0.60 mm

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Steel Grade: GPL, GPD



### KITCHEN RACKS & SHELVING

High strength,  
humidity resistance,  
easy assembly

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Thickness: 0.50 - 0.80 mm

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Steel Grade: GPL, GPD



### FURNITURE FRAMES

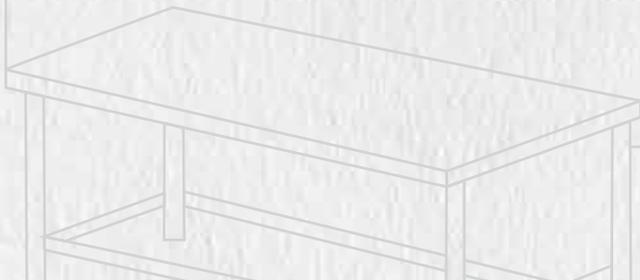
Strong structural  
integrity, suitable  
for powder coating

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Thickness: 0.60 - 0.80 mm

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Steel Grade: GPL, GPD





#### **AC ODU PANELS**

Corrosion resistance,  
excellent paint adhesion,  
suitable for outdoor conditions

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Thickness: 0.50 - 0.80 mm

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Steel Grade: GPL, GPD, GPEDD, GPIF



#### **DRAWER SYSTEMS & PULL-OUTS**

Scratch-resistant  
surface, smooth  
finish for aesthetics

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Thickness: 0.40 - 0.60 mm

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Steel Grade: GPL



#### **STORAGE UNITS & WARDROBES**

Premium finish,  
formability for  
bends and folds

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Thickness: 0.50 - 0.70 mm

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Steel Grade: GPL



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