MagTech

Zinc-aluminium-magnesium coated steel

MagTech is a hot-dipped zinc-aluminium-magnesium (Zn-Al-Mg) alloy coated steel supplied by Technical Trading Africa for roofing, walling, structural sections and roll-formed products. The addition of magnesium changes the micro-structure of the corrosion protection barrier, forming a highly stable layer that substantially outperforms traditional galvanized and aluminium-zinc coatings.

Key benefits

- Corrosion resistance up to 10 times that of traditional galvanized steel
- Improved bending performance — less likely to flake or peel
- Self-healing behaviour at cut edges and scratches
- Improved scratch resistance and surface hardness
- Less weld spatter during fabrication
- Suitable for roofing, walling, structural sections and lipped channels

Coating equivalents

Galvanized	Aluminium-zinc	MagTech
Z200	AZ100	M60
Z275	AZ150	M90
Z300	AZ170	M100
Z450	Not available	M150

Availability

Attribute	Detail
Stocked thicknesses	0.90 mm, 0.96 mm, 1.16 mm, 1.50 mm, 1.90 mm and 2.0 mm
Coating layers	M120 and M150
Lipped channel grades	Traditional 250 MPa and 450 MPa high strength
Contract supply	Any grade and thickness of MagTech can be brought in on contract

Guaranteed properties of the steel base

Mechanical property	Guaranteed minimum
Yield strength, MPa	G300 – 300 MPa; G550 – 550 MPa
Tensile strength, MPa	G300 – 340 MPa; G550 – 550 MPa
Elongation on 80 mm (0.60 mm and above), %	G300 – 18%; G550 – 2%

Chemical composition of the steel base

Chemical property	Guaranteed maximum %
Carbon – C	0.30
Manganese – Mn	1.60
Phosphorus – P	0.10
Sulphur – S	0.035

Coating adhesion and dimensional capability

Attribute	Value
Bend test – AM150 class	2t — no coating peel off
Thickness range	0.30 – 1.0 mm
Maximum width	800 – 1300 mm

Where t = the diameter of the mandrel in terms of the thickness of the product.

Supply conditions

Attribute	Normal	Optional
Coating class	AM100-200	—
Surface condition	Spangled	Minimised or regular
Surface treatment	Passivated, oiled and AFP	—
Branding	Branded	Not branded
Tolerance – dimensions	Class A	Class B
Tolerance – flatness	Class A	—

Optional supply conditions may be subject to dimensional restrictions.

Cyclic ageing performance

Each cycle of the cyclic ageing test comprises 2 hours of salt spray, 4 hours of drying at 60 °C and 2 hours of condensation at 95% relative humidity, to rapidly accelerate corrosion of the sample.

Coating	12 cycles	54 cycles	74 cycles	100 cycles	140 cycles
Z275	Pass	Pass	Failure	Failure	Failure
AZ150	Pass	Pass	Pass	Pass	Failure
M120	Pass	Pass	Pass	Pass	Pass
M180	Pass	Pass	Pass	Pass	Pass

Indicative warranties by location

Location	Rural	Urban / Countryside	Coastal / Industrial	Marine
Kilometres from the ocean	>50 km	6 to 50 km	1 to 6 km	0 to 1 km
Corrosion zone	C1	C2	C3	C4
Indicative warranty	20 Years	15 Years	10 Years	Available on request

Warranties shown are indicative only. The achievable warranty is confirmed in writing by Technical Trading Africa for the specific installation location and building use. Terms and conditions apply.

Issued by Technical Trading Africa (Pty) Ltd. Data is given in good faith for guidance; specifications are confirmed at order stage.