

ZINC-MAGNESIUM (+ZM)

Structural steels

Hot-coated

Flat-rolled carbon steel products can be coated with special metals or mixtures of metals, to completely avoid or postpone as much as possible the oxidation process of the steel.

These coatings may vary in type and thickness depending on the customer's needs and the impact that a given environmental context may have on the material.

Albasider is able to supply its customers with sheets, strips and strips of hot-coated materials, with thicknesses between 0.4 and 3 mm. Albasider also provides its customers with a wide range of coating types.

| | Thickness | Width |
|--------|-----------|---------------|
| Plates | 0.40 - 3 | ≤ 2000 |
| Tapes | 0.40 - 3 | ≤ 2000 |
| Straps | 0.40 - 3 | da 180 a 2000 |

Coating grades (+ZM)

| ZM | ZM 90 | ZM 120 | ZM 140 | ZM 200 | ZM 310 |
|----------------|-------|--------|--------|--------|--------|
| Thickness (µm) | 7/7 | 9/9 | 11/11 | 16/16 | 25/25 |

> Zinc Magnesium Coating (+ZM)

The Zinc-Magnesium Coating consists of a special zinc-aluminium-magnesium mixture.

The sum of aluminium and magnesium is between 1.5% and 8%, the remainder being zinc.

The minimum magnesium content must be no less than 0.2 per cent. This technology guarantees significantly higher corrosion resistance compared to other types of coating.

It is particularly suitable for very aggressive environments, when a very high standard of corrosion resistance is required.

| Surface Finish | | Surface Treatment | |
|----------------|------------|-------------------|--------------------|
| Finish | Appearance | C | Passivated |
| A | Standard | O | Oiled |
| B | Enhanced | CO | Passivated + Oiled |
| | | S | Anti fingerprint |

Structural steels

The category of coated structural steels allows users to have excellent performance in terms of strength, with a high minimum yield strength index.

In addition to these mechanical properties, the chosen coating allows protection from oxidation even after the material has been processed.

The higher the grade chosen, S220GD → S550GD, the greater the material's propensity for mechanical resistance.

Main fields of application:

CONSTRUCTION

CARS AND TRANSPORT

CIVIL AND INDUSTRIAL SUPPLIES

MECHANICAL CARPENTRY

PROFILES

Mechanical properties

| Thickness (mm) | EN 10346 | S220GD+ZM | S250GD+ZM | S280GD+ZM | S320GD+ZM |
|----------------|----------|-----------|-----------|-----------|-----------|
| 0.40 - 0.50 | Re (Mpa) | ≥ 220 | ≥ 250 | ≥ 280 | ≥ 320 |
| | Rm (Mpa) | ≥ 300 | ≥ 330 | ≥ 360 | ≥ 390 |
| | A 80 (%) | ≥ 16 | ≥ 15 | ≥ 14 | ≥ 13 |
| 0.51 - 0.70 | Re (Mpa) | ≥ 220 | ≥ 250 | ≥ 280 | ≥ 320 |
| | Rm (Mpa) | ≥ 300 | ≥ 330 | ≥ 360 | ≥ 390 |
| | A 80 (%) | ≥ 18 | ≥ 17 | ≥ 16 | ≥ 15 |
| 0.71 - 3 | Re (Mpa) | ≥ 220 | ≥ 250 | ≥ 280 | ≥ 320 |
| | Rm (Mpa) | ≥ 300 | ≥ 330 | ≥ 360 | ≥ 390 |
| | A 80 (%) | ≥ 20 | ≥ 19 | ≥ 18 | ≥ 17 |

| Thickness (mm) | S350GD+ZM | S390GD+ZM | S420GD+ZM | S450GD+ZM | S550GD+ZM |
|----------------|-----------|-----------|-----------|-----------|-----------|
| 0.40 - 0.50 | ≥ 350 | ≥ 390 | ≥ 420 | ≥ 450 | ≥ 550 |
| | ≥ 420 | ≥ 460 | ≥ 480 | ≥ 510 | ≥ 560 |
| | ≥ 12 | ≥ 12 | ≥ 11 | ≥ 10 | - |
| 0.51 - 0.70 | ≥ 350 | ≥ 390 | ≥ 420 | ≥ 450 | ≥ 550 |
| | ≥ 420 | ≥ 460 | ≥ 480 | ≥ 510 | ≥ 560 |
| | ≥ 14 | ≥ 14 | ≥ 13 | ≥ 12 | - |
| 0.71 - 3 | ≥ 350 | ≥ 390 | ≥ 420 | ≥ 450 | ≥ 550 |
| | ≥ 420 | ≥ 460 | ≥ 480 | ≥ 510 | ≥ 560 |
| | ≥ 16 | ≥ 16 | ≥ 15 | ≥ 14 | - |

Please note: Tests carried out transversely to the rolling direction.