

## Data Sheet

## G250

# Metal-Coated – GALVSTEEL<sup>™</sup>

Revision: 31/1/2012

#### **GENERAL DESCRIPTION**

GALVSTEEL™ G250 steel is a hot-dipped zinc-coated structural steel with a spangled surface and guaranteed minimum yield strength of 250MPa with good ductility. Suitable for severe roll forming.

#### **APPLICATIONS**

- Roofing
- Cladding
- General manufacturing
- Roll-formed structural sections
- Pressing

#### **STANDARDS**

- AS 1397:2011
- AS/NZS 1365:1996

| CHEMICAL COMPOSITION | TYPICAL (wt %) | EXPECTED MAXIMUM (wt %) [1] |
|----------------------|----------------|-----------------------------|
| Carbon (C)           | 0.035 - 0.070  | 0.07                        |
| Phosphorus (P)       | 0.01 - 0.02    | 0.03                        |
| Manganese (Mn)       | 0.14 - 0.25    | 0.25                        |
| Sulphur (S)          | 0.01 - 0.02    | 0.03                        |
| Silicon (Si)         | 0.00 - 0.03    | 0.03                        |
| Aluminium (AI)       | 0.03 - 0.07    | 0.08                        |

<sup>[1]</sup> Values shown refer to relevant Australian/ New Zealand standards unless tighter internal limits are applied

| MECHANICAL PROPERTIES                              | EXPECTED MINIMUM |
|--|------------------|
| Yield strength, MPa                                | 250              |
| Tensile strength, MPa                              | 320              |
| Elongation,<br>% on L <sub>o</sub> = 50mm (>0.6mm) | 25               |
| 180° transverse bend (L axis)                      | Ot               |

Typical Mechanical Properties are based on typical product dispatched to customers. Note that ductility will decline through a natural aging process during storage and/or paint stoving cycle.

| FABRICATING PERFORMANCE  1 = Limited 5 = Excellent |        |  |  |  |  |  |  |
|--|--------|--|--|--|--|--|--|
| Method   | Rating |  |  |  |  |  |  |
| Drawing  | 3      |  |  |  |  |  |  |
| Pressing   | 2      |  |  |  |  |  |  |
| Bending  | 5      |  |  |  |  |  |  |
| Roll-forming                                       | 5      |  |  |  |  |  |  |
| Welding  | 5      |  |  |  |  |  |  |
| Painting (Pre-treatment)                           | 5      |  |  |  |  |  |  |

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| AVAILABLE FINISHES |            |                   |  |  |  |  |  |  |  |
|--------------------|------------|-------------------|--|--|--|--|--|--|--|
| NORMAL OPTIONAL    |            |                   |  |  |  |  |  |  |  |
| Surface Condition  | Spangled   | Minimised spangle |  |  |  |  |  |  |  |
| Surface Treatment  | Passivated | Oiled             |  |  |  |  |  |  |  |
| Branding           | Branded    | Unbranded         |  |  |  |  |  |  |  |

Material should be used promptly (within 6 months) to avoid the possibility of storage related corrosion.

Mechanical properties are guaranteed at ambient/room temperatures. Please consult technical representatives at New Zealand Steel for high/low temperature use.

In the as-oiled state, long-term corrosion resistance cannot be guaranteed. Further surface treatment/coating is required.

| COATING ADHESIO | N - 180° BEND TEST |
|-----------------|--------------------|
| COATING CLASS   | GUARANTEED         |
| Z100            | Ot                 |
| Z200            | Ot                 |
| Z275            | Ot                 |
| Z350            | Ot                 |
| Z450            | 1t                 |
| Z600            | 2t                 |

Other coating classes may be available by enquiry

| DIMENSION (          | CAPABILITIES     |
|----------------------|------------------|
| THICKNESS RANGE (mm) | WIDTH RANGE (mm) |
| 0.30 - 0.33          | 70 – 1000*       |
| 0.34                 | 70 – 1040*       |
| 0.35 - 0.36          | 70 – 1230        |
| 0.37 – 1.48          | 70 – 1250        |
| 1.49 – 1.55          | 70 – 1230        |
| 1.56 – 1.85          | 70 – 1230        |
| 1.86 – 2.00          | 70 – 1220        |

\*All orders in the range 0.30 – 0.34 greater widths than1000/1040mm will be accepted on a trial basis, up to the maximum width of 1230mm.

Slitting and shearing available on request from New Zealand Steel.

These dimensions are a reflection of technical capability to produce. Supply conditions may be subject to dimensional restrictions and is subject to New Zealand Steel Marketing confirmation. Other dimensional combinations may be available by enquiry.

#### **TYPICAL PROPERTY RANGES**

| Thickness<br>mm |                         | Yield Strength & Tensile Strength<br>MPa |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
|-----------------|-------------------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|---------|-------|-----|-----|-----|
|                 | 260                     | 270                                      | 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 | 370 | 380  | 390      | 400     | 410   | 420 | 430 | 440 |
| 0.30            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
| 0.55            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
| 0.75            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
| 0.95            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
| 1.15            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
| 2.00            |                         |  |     |     |     |     |     |     |     |     |     |     |      |          |         |       |     |     |     |
|                 | Key Yield Strength (YS) |  |     |     |     |     |     |     |     |     |     |     | Tons | ilo etro | enath ( | LITS) | 1   | 1   | ı   |

| Thickness<br>mm |            | Total Elongation (%)                                     |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
|-----------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|-------|------|--|--|--|
| """"            | 23         | 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 0.30            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 0.55            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 0.75            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 0.95            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 1.15            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
| 2.00            |            |  |  |  |  |  |  |  |  |  |  |  |  |       |      |  |  |  |
|                 | Key GL= 50 |  |  |  |  |  |  |  |  |  |  |  |  | GL= 8 | 30mm |  |  |  |

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**Auckland**Tel. +64 9 375 8999
Fax. +64 9 375 8213
A BlueScope Steel Company