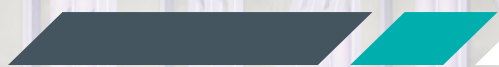


# — DiamondSteel **LGS**

Product Specification Sheet



# Light Gauge Steel

## Material Overview

DiamondSteel® Light Gauge Steel is the preferred material for framing products designed and manufactured by Con-form Group's specialist Modular Division:

- > DiamondSteel Wall Frame System
- > DiamondSteel Ceiling Frame System
- > DiamondSteel Wall Enveloping Frame System

These frames are sought after for a variety of industrial, commercial and residential applications including:

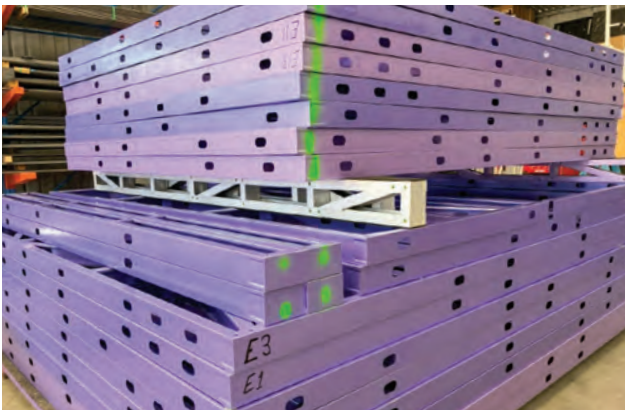
- > Mobile data centres
- > Modular buildings (single & multi-storey)
- > Transportable buildings
- > Transportable switch rooms
- > Transportable substations

DiamondSteel Light Gauge Steel is impervious to moisture, mould and fire. It is straight and true and will not warp or rot. It meets all necessary Australian Standards and is backed by a 50-year warranty. Come back in half a century and your structure will still be standing.

## Technical Information

|                                 |                                                                                                                                                                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Description</b>      | G550 steel with Activate® technology • Hot-dipped aluminium/zinc/magnesium alloy-coated • High tensile structural steel • Can be used to form a cross-section or specific shape • Structural loads can be handled with less support and larger spans • High-strength structural grade building material |
| <b>Material Characteristics</b> | Zinc content: 43.50% • Aluminium content: 55% • Silicon content: 1.50% • Coating mass (minimum): 150g/m <sup>2</sup> • Thickness (Basic Material Thickness): 0.75-0.95mm                                                                                                                                |
| <b>Service Life</b>             | Warranty against structural failure caused by corrosion • Minimum 50 years                                                                                                                                                                                                                              |
| <b>Applications</b>             | Mobile data centres • Modular buildings (single & multi-storey) • Modular cabins (holiday accommodation) • Remote mining accommodation • Transportable buildings • Transportable emergency housing • Transportable switch rooms • Transportable substations                                             |
| <b>Australian Standards</b>     | AS/NZS 1365:1996 (R2016) • AS 1397:2021                                                                                                                                                                                                                                                                 |
| <b>Mechanical Properties</b>    | Yield Strength: Longitudinal tensile - 550 Mpa • Tensile Strength: Longitudinal tensile - 550 Mpa • Elongation on 80mm (> 0.60mm) %: 7 • 90 degree Transverse Bend: 6t                                                                                                                                  |
| <b>Chemical Composition</b>     | Carbon: 0.2 • Manganese: 1.2 • Phosphorus: 0.04 • Sulphur: 0.03                                                                                                                                                                                                                                         |
| <b>Metal Coating Adhesion</b>   | 180 Degree Bend Test • Coating Class: AM150 • Result: 2t • $t = \text{diameter of mandrel in terms of thickness of the product}$                                                                                                                                                                        |
| <b>Dimensional Capabilities</b> | Thickness Range: 0.75-0.95mm • Maximum Width: 1220mm                                                                                                                                                                                                                                                    |
| <b>Fire Hazard Properties</b>   | Simultaneous determination of ignitability, flame propagation, heat release and smoke release AS/NZS 1530.3:1999 (R2016) • Ignitability Index 0-20: 0 • Spread of Flame Index 0-10: 0 • Heat Evolved Index 0-10: 0 • Smoke Developed Index 0-10: 1                                                      |

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Material Concessions</b>    | NCC non-combustible material concessions NCC 2022; AS/NZS 1530.3:1999 (R2016) • National Construction Code, Building Code of Australia 2022, Vol 1 Part C1, C2D10, (5) and (6)€ and Vol 2 Section H Part H3, H3D2, (1)€ • AS/NZS 1530.3:1999 (R2016) • May be used wherever a non-combustible material is required • Combustibility test for materials (steel substrate) AS 1530.1-1994 (R2016) • AS 1530.1-1994 (R2016)                                                                                                                                         |
| <b>Surface Condition</b>       | Spangled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Surface Treatment</b>       | Passivated and resin coated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Tolerances</b>              | Dimensions: Class A • Flatness: Class A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Fabricating Performance</b> | Bending: 2 • Welding: 4 • <i>Ranking: 1 = Limited to 5 = Excellent</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Termites</b>                | No termite barrier is required • 100% termite and borer proof                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Wet Areas</b>               | A ferrous metal which is inert to moisture attack including fungal growth • No additional moisture requirements apply to steel framing adjacent to internal wet areas                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Corrosion Resistance</b>    | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Energy Efficiency</b>       | Tight dimensional tolerances assist to improve energy efficiency by reducing air leakage between frame and insulating materials                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Insulation</b>              | When using steel wall framing with low thermal resistance cladding materials (metal, plastic, fibre cement sheeting) fixed directly to the frame then thermal breaks are required at all points of contact • Such as 12mm EPS or 20mm timber spacers                                                                                                                                                                                                                                                                                                             |
| <b>Handling</b>                | Suitable gloves must be worn when handling framing material • Handle steel in a manner suitable to protect the coating • Minor scratches are unlikely to affect product performance • Store frames on a flat, even surface • Do not place loads on top • Prolonged exposure of the frame to the weather increases the risk of depositing salts/other corrosive materials on the frame which can affect the service life of the product and the warranty • This is most easily addressed by ensuring that building wrap/cladding is installed as soon as possible |
| <b>Earthing</b>                | Framing must be earthed in accordance with NASH Standards, AS 3000:2018 Wiring Rules and any other state-local-electrical authority regulations                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Incompatible Materials</b>  | It is recommended that a separating membrane be used where the steel is in direct contact with materials that retain moisture • Incompatible materials which require an isolation method include copper, lead, brass, stainless steel, uncoated and bare steel, magnesium oxide, green or treated timber, polymers containing carbon black                                                                                                                                                                                                                       |







# Con-form<sup>®</sup> GROUP

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## MODULAR DIVISION

### Our Capability Brands

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Manufacturing  
Centre of Excellence



Digital Design  
Centre



Product  
Development Centre



Custom  
Engineered Product



Architectural  
Creative Partner



Acoustic  
Testing Lab



Australian  
Owned/Operated