SUPER STEEL

CLASS 1

Building Product Information

PRODUCT NAME

Grade 500L Hard Drawn Mesh (Non-Ductile Mesh)

PRODUCT DESCRIPTION

Manufactured to AS/NZS 4671, grade 500L Hard Drawn mesh is available for the reinforcement of concrete.

Key Tensile Specifications (as per AS/NZS 4671):

Yield Stress (Re): 500-750MPa

Minimum Tensile to Yield Strength Ratio (Rm/Re): 1.03

Minimum Uniform Elongation (Agt): 1.5%

The mesh is available as plain round profile bar in diameters: 5.3mm, 4.0mm, 6.3mm & 7.5mm with a pitch of 150mm.

PRODUCT IDENTIFIER

AS/NZS 4671:
665S, 668S, 663M, 661M

PLACE OF MANUFACTURE

New Zealand & Oversease

IMPORTER DETAILS

Legal Name: Super Steel Limited
Contacts: 09 320 1188
NZBN: 9429050231300
Website: http://www.supersteel.co.nz/
Email: info@supersteel.co.nz
Address: 5 Maurice Road, Penrose, Auckland

MANUFACTURE DETAILS

Legal Name:Steel & Tube Holdings Ltd.
Contacts: 0800 131 576
NZBN: 9429040949390
Website: https://steelandtube.co.nz/
Address: 7 Bruce Roderick Drive, East Tamaki, Auckland

Legal Name:TIANJIN TIANKANG METAL PRODUCTS CO., LTD
Contacts: 86 22 6850 9050
Website: www.tk-metal.com
Address: Tuanbo, Jinghai, Tianjin, China

Legal Name:ANPING CHENGXIN METAL MESH CO., LTD
Contacts: 86 311 8704 7119
Website: www.metalmesh-china.com
Address: NO.173 Shuiyuan Street, Shijiazhuang, Hebei, China.

RELEVANT BUILDING CODE

- B1 Structure: Functional requirements clause B1.2 and performance clauses; B1.3.1, B1.3.2 and B1.3.4(d);
- B2 Durability: Functional requirements clause B2.2;

CONTRIBUTIONS TO COMPLIANCE

- B1.2 and B1.3.1- Designers and engineers account for the combination of loads that structures are likely to experience. When design standards are calibrated against product standards, the use of suitable materials are specified so that the probability of failure is reduced to below acceptable limits. Clause 5.3.2.1 of NZS 3101:Part1:2006 specifies reinforcement is to comply with AS/NZS 4671. 500L reinforcing steel meets the minimum product and testing requirements specified in AS/NZS 4671 in order to satisfy these design requirements.
- B1.3.2 - 500L Hard Drawn Mesh meets the AS/NZS 4671 requirements of the ductility class L reinforcing steel grade. This grade of reinforcing steel specifies a minimum yield stress of 500MPa, uniform elongation of 1.5%, and tensile to yield strength ratio of 1.03.
- 1.3.4(d) - Appendix E of AS/NZS 4671 states that “all manufacturing facilities will produce reinforcing steel products with some variation in mechanical properties. This variation will occur across different batches but also within a single batch. Australian and NZ Standard Technical Committees have taken this into account in the development of Australian and NZ design standards.” As such, AS/NZS 4671 emphasize the importance of long term quality to ensure the conformance of the many tonnes of steel produced by a manufacturer rather than just a few sampled batches. P500L products conform to these LTQ requirements.
- B2.2 - 500L steel products meet the chemical, geometric, and mechanical requirements specified in AS/NZS 4671 to ensure the steel is fit for the reinforcement of durable concrete structures.

LIMITATIONS ON USE

- This product needs to be used in accordance with NZS3109, 3101 of the building code

DESIGN AND INSTALLATION REQUIREMENTS

- 500L Hard Drawn Mesh products are tested as specified by AS/NZS 4671.
- This product needs to be used in accordance with NZS3109, 3101 of the building code
- All activities performed on reinforcing steel (such as bending/welding/galvanising) shall comply with the relevant standards, primarily NZS 3101 and NZS 3109.
- NZS 3101 specifies that “due to the low carbon metallurgy of reinforcing steel manufactured to AS/NZS 4671, the steel is considered readily weldable.” Refer to AS/NZS 1554.3 for details of appropriate welding techniques.
- Reinforcing steel is often very heavy and difficult to handle. It is recommended that suitable gloves be worn at all times when handling reinforcing steel and suitable lifting equipment is utilised to minimize manual handling injuries.

DURABILITY AND MAINTENANCE REQUIREMENTS

- When considering the surface condition of reinforcing steel, some rust should be considered normal. Clause 3.4 of NZS 3109 indicates “tightly adhering mill scale or surface rust do not have a detrimental effect” and AS/NZS 4671 specifies “rust shall not be cause for rejection of reinforcing steel provided that a cleaned sample meets the minimum requirements of the AS/NZS 4671 Standard.” Endeavours should still be made to minimise exposure to moisture especially as this steel is in coil form and due to be subsequently processed.
- Avoid damage to the surface of reinforcing steel (say by sudden impacts or by introducing sharp notches) and excessive cold working (say by over straightening/bending) as this may detrimentally affect the steels localised ductility thereby raising the risk of brittle failure.

WARNINGS & BANS

The 500L Hard Drawn Mesh is not subject to warning or ban under section 26 of the Building Act 2004.