





PRODUCT NAME

Superductile 500E[™] reinforcing mesh (ductile mesh)

PRODUCT DESCRIPTION

Superductile 500E[™] is a structural welded steel reinforcing mesh manufactured to exceed the minimum requirements of AS/NZS 4671 "Steel for the reinforcement of concrete" – strength grade 500MPa and ductility class E– micro-alloyed reinforcing steel feed supplied by Pacific Steel (NZ) Ltd.

The mesh is available as plain round profile bar in diameters: 6.1mm, 7mm, 8mm & 9mm with a pitch of 200mm.

PRODUCT IDENTIFIER



Pacific Steel (NZ) Ltd R500E bar mark AS/NZS 4671: R500SE62, R500SE72, R500SE82 & R500SE92

PLACE OF MANUFACTURE

New Zealand

MANUFACTURE DETAILS

Legal Name:United Steel Limited Contacts: 0800 800 649 NZBN: 9429032129502 Website: http://www.unitedsteel.co.nz/ Email: akl.sales@unitedsteel.co.nz Address: 23 Trugood Drive, East Tamaki, Auckland

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

IMPORTER DETAILS

RELEVANT BUILDING CODE CLAUSES

- B1 Structure: Functional requirements clause B1.2 and performance clauses; B1.3.1, B1.3.2, B1.3.3(f) and B1.3.4(d)
- B2 Durability: Functional requirements clause B2.2
- AS/NZS 4671:2019, Steel for the reinforcement of concrete
- NZS 3101-1 and 2:2006, Concrete Structure Standard, incorporation Amendment No. 1, 2, and 3
- NZS 3109:1997, Concrete construction
- AS/NZS 1554.3, Structural steel Welding, Part3: Welding reinforcing steel

CONTRIBUTIONS TO COMPLIANCE

- NZS 3101:2006 requires reinforcing steel to comply with AS/NZS 4671:2019. "E" stands for "Earthquake". These grades of steel are
- specifically developed to have the ductility needed to perform in seismic conditions.
- Micro alloy (MA) process: trace elements such as vanadium and titanium used to provide strength and ductility.
- AS/NZS 4671:2019, Clause 3.4.1, batches, Steel mesh are produced as batches, maximum of 1000 sheet per batch and each batch is
- tested for compliance to AS/NZS 4671:2019.
- Batch test certificates are available on request.

LIMITATIONS ON USE

- Reinforcing steel, ("500E"), including Superductile 500E™ mesh, can only be:-
 - bent to the provisions of NZS 3109 and NZS 3101.1. (if deformed bar is to be galvanized, note specific bend diameters in NZS 3101.1)
 - $_{\odot}$ $\,$ welded to the provisions of NZS 3109 and AS/NZS 1554.3 $\,$
- 500MPa strength, class E ductility reinforcing steel, ("500E"), including Superductile 500E[™] mesh, cannot be re-bent cold. A suitable procedure for hot re-bending of 500E reinforcing steel can be found in NZS 3109 Clause 3.8.8.

DESIGN AND INSTALLATION REQUIREMENTS

- Superductile 500E[™] reinforcing mesh should only be specified by suitably qualified Structural Engineers to meet the performance criteria set out in the New Zealand Building Code.
- Superductile 500E[™] reinforcing mesh should be installed by competent and experienced personnel familiar with the requirements and practices of NZ reinforced concrete construction.
- As a micro-alloyed steel, Superductile 500E[™] can be hot-dipped galvanised.

DURABILITY AND MAINTENANCE REQUIREMENTS

- Avoid damage to the concrete that would reduce the cover depth or allow contaminant ingress through the concrete cover.
- Superductile 500E[™] reinforcing mesh should be stored in an essentially dry environment to avoid excessive surface corrosion forming.
- Reinforcing mesh should not be used if physically damaged.
- Tightly adherent mill scale or surface corrosion are not detrimental to the mesh performance, but excessive loose and flaking surface corrosion should be avoided.

WARNINGS & BANS

The Superductile 500E[™] is <u>not</u> subject to warning or ban under section 26 of the Building Act 2004.