



Certificate of Conformity



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InfraBuild Australia
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Certificate number: CM30155 Rev0

THIS IS TO CERTIFY THAT

SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar

Type and/or use of product:

SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar are steel reinforcing products manufactured to AS/NZS 4671:2019 – Steel for the reinforcement of concrete, for use in residential footing systems designed to AS 2870:2011 – Residential slabs and footings.

SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar are suitable for use in residential slabs and footings in Class 1 & Class 10 buildings.

Description of product:

SENSE 600® bar has minimum characteristic strength (f_{sy}) of 600 MPa and Ductility Class N ($A_{gt} > 5\%$) as defined in AS/NZS 4671:2019 – Steel for the reinforcement of concrete.

SENSE 600® TrenchMesh consist of a minimum of three to a maximum of six SENSE 600® longitudinal steel reinforcing bars welded into a mesh with cross wires to maintain the distance between bars.

COMPLIES WITH THE FOLLOWING BCA PROVISIONS AND STATE OR TERRITORY VARIATION(S)

BCA 2022

	Volume One	Volume Two including ABCB Housing Provisions	
Performance Requirement(s)		H1P1	Structural reliability and resistance
Deemed-to-Satisfy Provision(s):			
State or territory variation(s):			

Scope of certification: The CodeMark Scheme is a building product certification scheme. The rules of the Scheme are available at the ABCB website www.abcb.gov.au. This Certificate of Conformity is to confirm that the relevant requirements of the Building Code of Australia (BCA) as claimed against have been met. The responsibility for the product performance and its fitness for the intended use remain with the certificate holder. The certification is not transferrable to a manufacturer not listed on Appendix A of this certificate.

Disclaimer: The Scheme Owner, Scheme Administrator and Scheme Accreditation Body do not make any representations, warranties or guarantees, and accept no legal liability whatsoever arising from or connected to, the accuracy, reliability, currency or completeness of any material contained within this certificate; and the Scheme Owner, Scheme Administrator and Scheme Accreditation Body disclaim to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this certificate.

The purpose of Global-Mark **construction site audits** is to confirm the practicability of installing the product; and to confirm the appropriateness and accuracy of installation instructions. In placing the **CodeMark mark** on the product/system, the certificate holder makes a declaration of compliance with the certification standard(s) and confirms that the product is identical to the product certified herein. In issuing this Certificate of Approval Global-Mark has relied on the **expertise of external bodies** (laboratories, and technical experts).

Herve Michoux
Global-Mark Managing Director

Peter Gardner
Unrestricted Building Certifier

Date of issue: 13/12/2023

Date of expiry: 13/12/2026



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SUBJECT TO THE FOLLOWING LIMITATIONS AND CONDITIONS AND THE PRODUCT TECHNICAL DATA IN APPENDIX A AND EVALUATION STATEMENTS IN APPENDIX B

Limitations and conditions:

Building classification/s:

1. Volume 2 – H1P1

Design and specification of SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar shall be carried out by a Professional Engineer as defined in Schedule 1 of the BCA in accordance with InfraBuild SENSE 600® - Design Guide for Residential Footings T07 V1.0, October 2023.

Class 1 & 10

2. Volume 2 – H1P1

Installation must be carried out in accordance with:

- the professional engineer's plans, and
- AS 2870:2011 – Residential slabs and footings, with the exceptions of the substitution of 3 or 4 individual 500N bars by SENSE 600® TrenchMesh™ as detailed in Table 1

Class 1 & 10

Table 1

500N		SENSE 600® TrenchMesh™			
Designation	Designation	No. Bars	Diameter (mm)	Area (mm ² /bar)	Total Area (mm ²)
3N16	3S15TM	3	14.6	168	503
4N16	4S15TM	4	14.6	168	670

APPENDIX A – PRODUCT TECHNICAL DATA

A1 Type and intended use of product

Refer to page 1.

A2 Description of product

Equivalent Load Capacities – Steel Areas and Yield Strengths SENSE 600® TrenchMesh™ is given in Table 2a:

Table 2a:

500L Trench Mesh				SENSE 600® TrenchMesh™			
Designation	Total Area (mm ²)	Grade fsy (MPa)	Load Capacity (kN)	Designation	Total Area (mm ²)	Grade fsy (MPa)	Load Capacity (kN)
3-L11TM	270	500	135	3-S10TM	225	600	135
4-L11TM	360	500	180	4-S10TM	300	600	180
5-L11TM	450	500	225	5-S10TM	375	600	225
6-L11TM	540	500	270	6-S10TM	450	600	270
3-L12TM	330	500	167	3-S11TM	283	600	170
4-L12TM	440	500	222	4-S11TM	377	600	226
5-L12TM	550	500	278	5-S11TM	471	600	283
6-L12TM	660	500	334	6-S11TM	565	600	339
500N Trench Mesh				SENSE 600® TrenchMesh™			
3N16	603	500	302	3-S15TM	503	600	302
4N16	804	500	402	4-S15TM	670	600	402

Equivalent Load Capacities – Steel Areas and Yield Strengths SENSE 600® Steel Reinforcing Bars is given in Table 2b:

Table 2b:

500N Bars				SENSE 600® Steel Reinforcing Bar			
Designation	Total Area (mm ²)	Grade fsy (MPa)	Load Capacity (kN)	Designation	Total Area (mm ²)	Grade fsy (MPa)	Load Capacity (kN)
N12	113	500	56.5	S11	94.2	600	56.5
N16	200	500	101	S15	168	600	102

A3 Product specification

SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar shall be specified in accordance with the requirements of:

- AS 2870:2011 – Residential slabs and footings, and
- InfraBuild SENSE 600® - Design Guide for Residential Footings T07 V1.0, October 2023.



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A4 Manufacturer and manufacturing plant(s)

The Australian Steel Co. (Operations) Pty Ltd, 105-123 Dohertys Road, Laverton North, VIC, 3026

InfraBuild (Newcastle) Pty Ltd, Ingall Street, Mayfield, NSW, 2304

InfraBuild Reinforcing (Sunshine) 528 Ballarat Rd Sunshine VIC Australia 3020

InfraBuild (Acacia Ridge) 234 Bradman St Acacia Ridge QLD Australia 4110

InfraBuild (Revesby) Gate 3, Mons St Revesby NSW Australia 2212

InfraBuild Reinforcing 11 Carolyn Way Forrestfield WA Australia 6058

A5 Installation requirements

SENSE 600® TrenchMesh™ and SENSE 600® Steel Reinforcing Bar shall be installed in accordance with the requirements of AS 2870:2011 – Residential slabs and footings, and the professional engineer's plans.

A6 Other relevant technical data

Any referenced documents within the technical literature identified in Appendices A3 & A5.

The technical justification of substitution is provided in InfraBuild Performance Solution Report – SENSE 600® TrenchMesh™ v1.1, dated 5 December 2023.

APPENDIX B – EVALUATION STATEMENTS

B1 Evaluation methods

The following assessment methods have been used to determine compliance with BCA 2022:

Code Clause	Assessment Method(s)	Evidence of suitability	Evidence reference in B2
Volume Two H1P1	BCA Volume Two A2G2 (2)(a) & (c)	BCA Volume Two A5G3 (1)(e) Certificate or report from a professional engineer or other appropriately qualified person, and BCA Volume Two A5G3 (1)(f) Another form of documentary evidence (Product Design Guide)	Items 1, 2, 3, 4, 5, 6, 7, 8 & 9

B2 Reports

The following reports have been used as evidence to determine compliance with BCA 2022:

Ref	Author	Reference	Date	Description	NATA Registration
1	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 311021	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Reinforcing Bar Manufactured in coil to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
2	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 31103	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Reinforcing Bar Manufactured in coil to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
3	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 31111	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Steel Reinforcing Mesh Manufacture to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
4	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 31106	1 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Steel Reinforcing Mesh Manufacture to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
5	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 31107	1 Nov 2022	CERTIFICATE OF APPROVAL - Product Conformity Certification Steel Reinforcing Mesh Manufacture to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
6	Australasian Certification Authority for Reinforcing and Structural Steels Ltd (ACRS)	Certificate Number: 221101	22 Nov 2003	CERTIFICATE OF APPROVAL - Product Conformity Certification Steel Reinforcing Mesh Manufacture to AS/NZS 4671:2019	JAS-ANZ Accreditation Nos.: Z5221212AC
7*	Leigh D Appleyard (CPEng)	N/A	19 Oct 2023	Expert Opinion - Performance Solution Report - SENSE 600® TrenchMesh™ and SENSE 600® bars	N/A
8	Anthony Ng of InfraBuild	Performance solution report - SENSE 600® TrenchMesh™ v1.1	5 Dec 2023	Performance solution report - SENSE 600® TrenchMesh™	N/A
9	Anthony Ng & Graeme McGregor of InfraBuild	SENSE 600® - Design Guide for Residential Footings – T07 V1.0	Oct 2023	SENSE 600® - Design Guide for Residential Footings	N/A

* The Certificate Holder has chosen not to make the above identified evidence of compliance publicly available, due to the document(s) being considered commercial in confidence.