

UNDERSTANDING COMPLIANCE

The NCC outlines deem-to-satisfy requirements for metal claddings based on compliance to Australian standards. Whilst the applicable Australian standards differ between Residential and Non-Residential buildings the underlying common tenants are;

- a) that installed metal claddings and structural elements must be able to meet expected Structural, Wind and installation loads as per the Australian Standards.
- b) that installed metal claddings must be sufficiently durable to meet the amenity and sustainability requirements of the Australian Standards.

To determine a metal cladding’s capacities and ability to comply with Australian design standards, metal cladding products must be tested in accordance with AS 4040.1. Additionally steel structural elements such as Fielders ARAMAX® Freespan must be tested to the requirements outlined in AS 4100 and AS/NZS 4600.

The determination of design capacities for light gauge structural cladding systems incorporating the complex interactions with structural connections, as used in ARAMAX® FreeSpan, cannot be determined without a comprehensive testing regime. Fielders have worked closely with The University of Sydney Engineering faculty to undertake such testing and build predictive design software, based on the outcomes of the testing regime.

Metal Cladding products that cannot demonstrate testing to AS 4040.1 and compliance with relevant AS 4100 and AS/NZS provisions do not meet the deemed-to-comply provisions of the NCC.

CHAIN OF RESPONSIBILITY

It is the primary responsibility of each person in the chain, from designer to supplier to installer to builder to ensure that products used on a building are;

- a) Suitable for the intended use
- b) Comply with relevant Australian Standards and NCC provisions

Increasingly regulatory authorities are requiring documentary evidence of a products compliance to the requirements of the NCC. Using non-confirming products can leave installers, builders and suppliers liable for cost of replacement, rectification and consequential damages.

INSIDE OUR BRANDS

Fielders ARAMAX® Freespan products are manufactured using Australia’s leading coated steel and prepainted aluminium materials. COLORBOND® prepainted steel and ZINCALUME® steel and are supplied to Fielders in large coils. Fielders then shapes and forms these materials (through the process known as rollforming) into their range of roofing profiles, gutters, fascias and downpipes, plus products for fencing systems and home additions such as verandahs, patios and carports.

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NATIONAL CONSTRUCTION CODE OF AUSTRALIA COMPLIANCE STATEMENT FOR FIELDERS ARAMAX® FREESPAN

JUNE 2019 | VER 1.0
THIS VERSION SUPERSEDES ALL PREVIOUS VERSIONS



THIS BULLETIN DETAILS RELEVANT NCC OF AUSTRALIA COMPLIANCE INFORMATION RELEVANT TO FIELDERS ARAMAX® FREESPAN.

The National Construction Code of Australia (NCC) details the minimum necessary requirements for safety, health, amenity and sustainability that need to be met in the design and construction of new buildings (and new building work in existing buildings) throughout Australia.

Using products that do not conform to the NCC requirements can leave installers, builders and suppliers liable for cost of replacement, rectification and consequential damages. Fielders range of Australian-made steel and aluminium building products has been developed, tested and manufactured to not only meet our country’s demanding climatic and geographic requirements but also to provide building designers, builders and owners with the confidence that comes from using guaranteed compliant products.

The compliance statements overleaf outline compliance of Fielders ARAMAX® Freespan with both the National Construction Code of Australia and the relevant Australian Standards for both Residential and Non-residential buildings.

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Metal Cladding products that cannot demonstrate testing to AS 4040.1 and compliance with relevant AS 4100 and AS/NZS provisions do not meet the deemed-to-comply provisions of the NCC.



NATIONAL CONSTRUCTION CODE OF AUSTRALIA (NCC) COMPLIANCE STATEMENT
FIELDERS ARAMAX® FREESPAN



ISSUING IDENTITY: BLUESCOPE STEEL LIMITED		REFERENCE ID: FIELNCC-ARAMAX		VERSION: 1.0		ISSUE DATE: JUNE 2019	
APPLICATION		ROOFING and WALLING for class 2 to 9 Buildings (Non-Residential) and for class 1 and 10 Buildings (Residential)					
SCOPE OF USE		The product noted below may be used as roof and or wall cladding when designed using the individual technical data available for each product at https.specifying.fielders.com.au					
APPLICABLE PRODUCT		FIELDERS ARAMAX® FREESPAN					
PRODUCT ATTRIBUTES	Base Metal Thickness Range	0.75mm - 1.2mm				1.2mm	
	Min Yield Strength	500 - 550 MPa				220-225 MPa	
BASE MATERIAL BRAND NAME		 ZINCALUME® Steel	 COLORBOND® Steel	 COLORBOND® Ultra Steel	 COLORBOND® Metallic Steel	Pre-painted aluminium	
TYPICAL ENVIRONMENTS		For Benign environments; > 200m from breaking surf > 100m from calm marine	For Benign environments; > 200m from breaking surf > 100m from calm marine	For coastal and industrial environments; > 100m from breaking surf > 0m from calm marine	For Benign environments; > 400m from breaking surf > 200m from calm marine	For severe coastal and industrial environments; < 0m from breaking surf	
COATING	AM125		AM100		AM150		AM100
	125 g/m² minimum metallic coating mass, (aluminium/zinc/ magnesium alloy) with Activate™ technology to AS 1397:2011		100 g/m² minimum metallic coating mass, (aluminium/zinc/ magnesium alloy) with Activate™ technology to AS 1397:2011		150 g/m² minimum metallic coating mass, (aluminium/zinc/ magnesium alloy) with Activate™ technology to AS 1397:2011		100 g/m² minimum metallic coating mass, (aluminium/zinc/ magnesium alloy) with Activate™ technology to AS 1397:2011
PAINT		N/A	Paint Coating to AS2728:2013 includes Thematech® solar reflectance technology		Paint Coating to AS2728:2013 Type 4 includes Thematech® solar reflectance technology		Paint Coating to AS2728:2013 Type 3 includes Thematech® solar reflectance technology
SOLAR ABSORPTANCE VALUE			range from 0.32 to 0.96				range from 0.32 to 0.96
ROOFING APPLICATION WARRANTY		Up to 36Years*		Up to 36Years*		Up to 30Years*	
WALLING APPLICATION WARRANTY		Up to 18Years* (Non - residential) Up to 15Years* (Residential)		Up to 20Years* (Non - residential) Up to 15Years* (Residential)		Up to 20Years* (Non - residential) Up to 15Years* (Residential)	
COMBUSTIBILITY		Fielders products manufactured from COLORBOND®, ZINCALUME® or galvanised steel materials all have an Ignitability Index, Spread of Flame index and Heat Evolved Index of 0 (zero) and as such are considered non-combustible materials in accordance with the National Construction Code clauses C1.19.(e).(v) and 3.7.1.1.(e). Aluminium products manufactured from pre-painted aluminium materials have a Spread-of-Flame index of 0 (zero) and as such are considered non-combustible materials in accordance with the National Construction Code clauses C1.19.(e).(v) and 3.7.1.1.(e).					
COMPLIANCE WITH THE DEEMED-TO-SATISFY PROVISION OF THE NCC		NCC Volume 1 - For class 2 to 9 Buildings (Non-Residential)					
		B1.0 Deem-to-Satisfy provisions B1.4 Determination of structural resistance of materials and form of construction (j) (iv) Metal roofing: AS1562.1:2018 (except in cyclone areas) (c) (i) Steel Structures AS4600:2018 (ii) Cold Formed steel structures AS4100:1998 (R2016)					
		Section F1.0 Deemed - to - Satisfy Provisions - F1.5 Roof coverings Metal Sheet roofing complying with AS1562.1 : 2018					
		NCC Volume 2 - For class 1 and 10 Buildings (Housing Provisions) 3.5.1 Roof cladding Published Capacity tables in reference manuals noted below are suitable to determine structural adequacy and serviceability of nominated products for individual projects referencing the following Australian Standards and NCC requirements: NCC 2016, Volume One, Section B - Structure, Part B1 -Structural provisions (Deemed-to-Satisfy Provisions), Clause B1.1 Resistance to actions, and Clause B1.2 Determination of individual actions NCC 2016, Volume One, Section B - Structure, Specification B1.2 - Design of Buildings in Cyclonic Areas					
ACCEPTABLE CONSTRUCTION AND DESIGN MANUALS:		AS1562.1:2018 - Design and Installation of sheet and wall cladding - Metal					
		Fielders ARAMAX® Freespan Profile data at https://specifying.Fielders.com.au/aramax/aramax-freespan/ Fielders project specific Custom design assessment to AS/NZS 4600:2018 Cold-Formed Steel Structures Code and AS 1664.1-1997 Aluminium Structures Code					
AUSTRALIAN STANDARDS COMPLIANCE		Fielders published Limit State Capacities for Strength and Serviceability have been determined from testing at NATA¹ accredited facilities in compliance with the following standards;					
		AS 1562.1:2018 Design and installation of sheet roof and wall cladding. Part 1: Metal AS 4040.0 – 1992 (Reconfirmed 2016) Methods of testing sheet roof and wall cladding. Method 0 : Introduction, list of methods and general requirements AS 4040.1 – 1992 (Reconfirmed 2016) Methods of testing sheet roof and wall cladding. Method 1 : Resistance to concentrated loads AS 4040.2 – 1992 (Reconfirmed 2016) Methods of testing sheet roof and wall cladding. Method 2 : Resistance to wind pressures for non-cyclone regions AS 4040.3:2018 Methods of testing sheet roof and wall cladding. Method 3 : Resistance to wind pressures for cyclone regions AS/NZS 4600:2018 Cold Formed Steel Structures Section 8 8.1 Testing for determining material properties 8.2 Testing for assessment or verification 8.3 Coefficient of variation of structural characteristics 8.4 Design Values AS 4100:1998 (R2016) Steel Structures : Section 17 Testing of Structures or Elements					
		Limit state capacities provided within the Fielders project specific design assessment are suitable to determine structural adequacy and serviceability in accordance with; AS/NZS 1170.0:2002 Structural design actions, Part 0: General principles AS/NZS 1170.1:2002 (Reconfirmed 2016) Structural design actions, Part 1: Permanent, imposed and other actions AS/NZS 1170.2:2011 (Reconfirmed 2016) Structural design actions, Part 2: Wind actions AS/NZS 1170.3:2011 (Reconfirmed 2016) Structural design actions, Part 3: Snow and ice actions					
		AS/NZS 4600:2018 Cold-Formed Steel Structures Code when used in accordance with Fielders project specific Custom design assessment					AS 1664.1 -1979 Aluminium Structures Code : Limit State Design when used in accordance with Fielders project specific Custom design assessment
		AS 1562.1:2018 Design and Installation of sheet and wall cladding Part 1 : Metal Section 2.1.3 Steel: Requires metallic coated products to comply with ; - AS 1397-2011 - Continuous hot dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed aluminium and magnesium and Pre-painted products to comply with ; - AS 1397-2011 - Pre-finished /pre-painted sheet metal products for interior/ exterior applications - AS 1397 defines the coating types and classes and steel grades for hot dip metallic coated steel. Product made to other standards may not meet the ductility or strength requirements assumed by design standards or the minimum coating class requirements critical to building durability. Fielders product coating compliance is nominated at “Coating” above. AS/NZS2728 specifies requirements for the physical properties and long-term durability of pre-finished/pre-painted sheet metal products. Fielders pre-painted compliance is nominated at “Paint” above for Performance requirement 1.3.1 Metal products Hot dipped metallic coated steel (types Z, ZM, AZ, AM) complying with AS1397, stainless steel, aluminium or aluminium ally in the form of sheet, coil or strip.					Aluminium feed coil complies to AS/NZS 1734:1997 Aluminium and Aluminium alloys - Flat sheet, coil sheet and plate. Pre-painted aluminium complies with AS/NZS 2728 Pre-finished /pre-painted sheet metal products for interior/ exterior applications

¹National Association of Testing Authorities
*visit bluescope.com.au/warranties to obtain a pre-approved warranty for your project warranties apply against corrosion to perforation due to weathering in the natural environment only