

# ESPAN® 340

## ESPAN® 340 EXPLAINED

The Espan® 340 Roofing and External Wall Cladding system comprises:

- ▶ A 49mm deep trough profiled steel sheet
- ▶ Associated design and installation information

Metalcraft fabricates the Espan® 340 sheets from steel manufactured by New Zealand Steel. This steel is supplied with different protective coatings which are designed to withstand conditions in specific New Zealand Corrosion Zones. Refer to NZ Steel's Environmental Categories Brochure at [www.nzsteel.co.nz/technical-resources](http://www.nzsteel.co.nz/technical-resources) for details.

Espan® 340 sheets are available in the following NZ Steel branded products:

- ▶ Colorsteel® Endura®
- ▶ Colorsteel® Maxx®

The sheets are fixed with hidden clips that are attached directly to the purlins. Clip-on solar panels may also be installed.

Espan 340® sheets are available in the following sizes:

- ▶ Thickness: 0.55mm
- ▶ Width: Cover=340mm Sheet=354mm

The sheet profile is available as a flat pan or with one or two swages incorporated into the pan. For profile dimensions see detail above right.

### PURPOSE

Metalcraft Roofing supply the Espan® 340 as a vertical wall cladding, and on roofs with a defined minimum pitch of 3 degrees.

### SCOPE OF USE

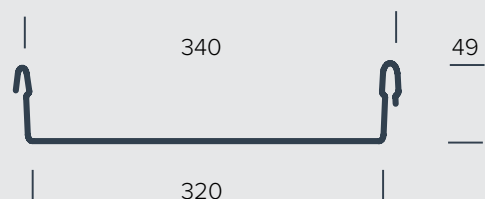
Metalcraft Roofing supply the Espan® 340 Roofing and External Wall Cladding system for use on commercial and residential buildings within the following scope:

#### LOCATION:

- ▶ In wind zones:
  - ▶ Up to and including Extra High as defined by NZS-3604:2011.
  - ▶ Subject to specific engineering, if the engineer has satisfied themselves that the product, pitch and fixings will meet the conditions.
- ▶ In all climate zones as defined by NZS-3604:2011, subject to the limitations set out below (see limitations overleaf).
- ▶ On buildings located within 1m of the relevant boundary, in respect of fire spread only

#### BUILDING:

- ▶ On new buildings that have been designed and constructed to comply with the NZ Building Code (NZBC) using timber or steel framing.
- ▶ On existing buildings using timber and steel framing where the designer and installer have satisfied themselves that the building is suitable for the intended building work.
- ▶ In conjunction with a vapour permeable building wrap that has a permeability of 36g/m<sup>2</sup>/day of a vapour resistance of no more than 500MNs/g.
- ▶ In conjunction with a potable water collection system.



### VERSION:

NOTE: Uncontrolled in printed format.

### DATE:

**Name:** Frances Charles  
**Position:** National Sales & Marketing Mgr

Signed on behalf of: Metalcraft Roofing.

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

### FURTHER INFORMATION

For further product assistance please contact:  
[www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

To find your nearest Metalcraft Roofing branch visit [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)

## LIMITATIONS OF USE

### LOCATION:

- ▶ Espan 340® may be used as a roof cladding system in exposure zones B, C & D as defined in Sec 4, NZS3604:2011. For use in "Microclimatic considerations," (as defined in Sec 4.2.4) refer to Metalcraft Roofing.
- ▶ Espan® 340 may be used as a wall cladding system in exposure zones B & C. Where Espan® 340 is to be used in exposure Zone D, then only Colorsteel® Endura® or Colorsteel® Maxx® may be used.

### BUILDING:

- ▶ Where Espan® 340 is used in an insulated building in conjunction with steel framing, a thermal break is required. This will depend on the location of the insulation layer. Timber thermal breaks are recommended.
- ▶ Contact with other materials must be in accordance with Table 21 (E2/AS1), or compatible with the The New Zealand Metal Roofing Manufacturers Association Inc (NZMRM) Code Of Practice.
- ▶ Building height and design wind speed is limited by the Espan® 340 design load span tables (refer to: [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz)).
- ▶ Where it is used as a roof cladding system, Espan® 340 sheet lengths of ≤40m must be installed on a roof with a minimum pitch of 3°. Espan® 340 sheet lengths of >40m but less than <60m must be installed on a roof with a minimum pitch of 4°.
- ▶ Espan® 340 must always be installed in conjunction with a drained cavity.

## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Metalcraft Roofing requirements, the Espan® 340 Roofing and External Cladding system will comply with or contribute to compliance with the following provisions of the NZ Building Code.

## USEFUL INFORMATION

Refer to [www.metalcraftgroup.co.nz](http://www.metalcraftgroup.co.nz) for information relating to:

- ▶ Technical information, drawings and specification.
- ▶ Specification of the correct fasteners.
- ▶ Care and maintenance.
- ▶ The Metalcraft Roofing warranty.

## NZ STEEL ASSURANCE

As the manufacturer of the steel from which Espan® 340 is fabricated, NZ Steel provides assurance that the steel:

- ▶ Has been manufactured in accordance with AS 1397-2001.
- ▶ Is coated in accordance with AS/NZS 2728:2013, or galvanized in accordance with AS/NZS 2312.2:2014.

## SOURCES OF INFORMATION:

- ▶ MBIE Acceptable Solutions
- ▶ AS/NZS-1397:2001 "Steel sheet and strip—Hot-dip zinc-coated or aluminium/zinc-coated"
- ▶ NZ Metal Roof and Wall Cladding Code of Practice (NZMRM) (V2.2)
- ▶ AS/NZS-1170:2004 "Structural design actions"
- ▶ AS/ NZS-2728:2013 "Prefinished/pre-painted sheet metal products for interior and exterior building applications"

## CONTACT INFORMATION

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NZBC Clause	Basis of compliance	
	Means of compliance	Relevance
<b>B1 Structure</b> B1.3.1, B1.3.2, B1.3.3 (a, b, c, d, g, i)	<b>ACCEPTABLE SOLUTION</b> <b>B1/AS1</b>	<ul style="list-style-type: none"> <li>▶ AS/NZS 1397:2011</li> <li>▶ AS/NZS 1170:2002 (span tables)</li> </ul>
<b>B2 Durability</b> B2.3.1 (b)	<b>ACCEPTABLE SOLUTION</b> <b>B2/AS1</b>	<ul style="list-style-type: none"> <li>▶ Coated in accordance with AS/NZS 2728:2013. (NZ Steel claim) cited in E2/AS1</li> </ul>
<b>C3 Fire Affecting Areas Beyond the Fire Source</b> C3.4(a), C3.5, C3.7 (a)	<b>ACCEPTABLE SOLUTION</b> <b>C/AS2-C/AS7</b> <ul style="list-style-type: none"> <li>▶ Metals are non-combustible</li> </ul>	<ul style="list-style-type: none"> <li>▶ ISO5660 BRANZ (FH 6102-TT, dated 3/1/2017) (Material Group 1-S)</li> <li>▶ Steel non-combustible (refer para 5.8 C/AS2-C/AS7)</li> </ul>
<b>E2 External Moisture</b> E2.3.1, E2.3.2, E2.3.7 (a-c)	<b>ACCEPTABLE SOLUTION</b> <b>E2/AS1</b>	<ul style="list-style-type: none"> <li>▶ NZMRM Code of Practice (v2.2)</li> </ul>
<b>F2 Hazardous Building Materials</b> F2.3.1	<b>ALTERNATIVE SOLUTION</b> <ul style="list-style-type: none"> <li>▶ ColorCote safety data sheet</li> </ul>	<ul style="list-style-type: none"> <li>▶ Coating system is inert once dry</li> </ul>

Other performance claims	Basis of compliance	
	Means of compliance	Relevance
Espan®340 Roofing and External Cladding system will not contaminate potable water	<ul style="list-style-type: none"> <li>▶ AS/NZS 4020:2005</li> </ul>	<ul style="list-style-type: none"> <li>▶ Claimed by manufacturer: NZ Steel</li> <li>▶ BRANZ statement that metal roof suitable refer: <a href="http://www.level.org.nz/water/watersupply/mains-or-rainwater/harvesting-rainwater/">http://www.level.org.nz/water/watersupply/mains-or-rainwater/harvesting-rainwater/</a></li> </ul>

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