

# TARC Corrugate

## PURPOSE

The Architectural Roofing Company (TARC) supplies TARC Corrugate as a roof and wall cladding.

## EXPLANATION

TARC Corrugate is a corrugate long-run roof and wall cladding product. Manufactured by TARC using New Zealand Steel. Available in a range of Colorsteel and Colorcote colours to withstand NZ's conditions.

The steel is supplied with different protective coatings to withstand NZ's exposure zones.

- > Colorsteel® Endura®
- > Colorsteel® Maxx®
- > Colorcote Zinacore
- > Colorcote Magnaflow



They are available in the following sizes:

- > Thickness (mm): 0.40-0.55mm

## SCOPE AND LIMITATIONS OF USE

Scope	Limitations
<b>Location</b>	
In all wind zones as defined in NZS 3604:2011 and in all calculated designloads.	<ul style="list-style-type: none"> <li>&gt; TARC Corrugate load spans apply in wind zones up to and including extra high.</li> <li>&gt; Where the calculated design loads exceed 2.5kPa the engineer must satisfy themselves that the product, pitch and fixings will meet the conditions.</li> </ul>
In all exposure zones as defined by NZS 3604:2011.	<ul style="list-style-type: none"> <li>&gt; In exposure Zone D only Colorsteel® Endura® or Colorsteel® Maxx® may be used.</li> <li>&gt; For use in "Microclimatic considerations" (as defined in Sec 4.2.4) refer to TARC.</li> </ul>
On buildings located any proximity to a relevant boundary.	<ul style="list-style-type: none"> <li>&gt; TARC Corrugate is non-combustible.</li> </ul>
<b>Building</b>	
On timber or steel structural framing.	<ul style="list-style-type: none"> <li>&gt; Where TARC Corrugate is used in an insulated building and in conjunction with steel framing, a thermal break is required.</li> </ul>
In conjunction with a primary structure that complies with the NZ Building Code or where the designer has established that the existing structure is suitable for the intended building work.	<ul style="list-style-type: none"> <li>&gt; Building height is limited by the TARC Corrugate design load span tables (refer to: <a href="http://www.tarc.co.nz">www.tarc.co.nz</a>) or specific engineering, where applicable.</li> </ul>
As a wall cladding.	<ul style="list-style-type: none"> <li>&gt; TARC Corrugate must always be installed over a drained and ventilated cavity when installed horizontally. When installed Vertically it may direct-fixed dependent on the risk score calculation per E2/AS1 risk matrix methodology.</li> <li>&gt; Flashings, flexible and rigid building underlays and TARC Corrugate fixings must be in accordance with E2/AS1 and NZMRM Code of Practice.</li> <li>&gt; Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).</li> </ul>
As a roof cladding.	<ul style="list-style-type: none"> <li>&gt; TARC Corrugate requires a minimum roof pitch of 8° for lengths ≤40m. When the combined sheets have a length of between 40 and 60m the roof pitch should be increased by 1°. When rainfall intensity exceeds 100mm/hour the minimum pitch needs to be a further 1 degree for every 10 metres of sheet over 40m.</li> <li>&gt; A potable water collection system may be installed.</li> <li>&gt; Flashings, flexible and rigid building underlays and TARC Corrugate fixings must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).</li> <li>&gt; Contact with other materials must be in accordance with E2/AS1 and NZMRM Code of Practice (V3.0).</li> </ul>

## PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all TARC requirements, TARC Corrugate will comply with or contribute to compliance with the following performance claims:

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement <sup>1</sup>	Demonstrated by
<b>B1 Structure</b> B1.3.1, B1.3.2, B1.3.3 (a, b, c, d, g, i)	ACCEPTABLE SOLUTION B1/AS1	<ul style="list-style-type: none"> <li>› AS/NZS 1397:2011.</li> <li>› AS/NZS 1170:2002 (for span tables).</li> </ul>
<b>B2 Durability</b> B2.3.1 (b) B2.3.2 (b)	ACCEPTABLE SOLUTION B2/AS1	<ul style="list-style-type: none"> <li>› Coated in accordance with AS/NZS 2728:2013 (cited in E2/AS1).</li> </ul>
<b>C3 Fire Affecting Areas Beyond the Fire Source</b> C3.4 (a), C3.7 (a)	ACCEPTABLE SOLUTION C/AS1 C/AS2 1st edition, June 2019	<ul style="list-style-type: none"> <li>› Steel is non-combustible.</li> <li>› BRANZ (FH 6102-TT, dated 3/1/2017) (Material Group 1-S).</li> <li>› BRANZ is accredited to perform ISO 5660 test.</li> </ul>
<b>E2 External Moisture</b> E2.3.1, E2.3.2, E2.3.7 (a, b, c)	ACCEPTABLE SOLUTION	<ul style="list-style-type: none"> <li>› NZMRM Code of Practice (V3.0).</li> </ul>
<b>F2 Hazardous Building Materials</b> F2.3.1	ALTERNATIVE SOLUTION	<ul style="list-style-type: none"> <li>› Coating system is inert once dry.</li> <li>› Colorsteel® safety data sheet.</li> </ul>

1. The above statement shows we have met their obligations under s14G(2) of the Building Act 2004.

Other performance statement	BASIS OF STATEMENT	
	Performance statement	Demonstrated by
TARC Corrugate will not contaminate potablewater.	AS/NZS 4020:2005	<ul style="list-style-type: none"> <li>› Claimed by manufacturer: NZ Steel.</li> <li>› BRANZ statement that metal roof suitable refer to <a href="http://www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater">www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater</a>.</li> </ul>

## NZ STEEL ASSURANCE

As the manufacturer of the steel, from which TARC Corrugate 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.

NZ Steel has established an Environmental Management System certified to ISO 14001.

For more information on the specific exposure zones and environmental impacts of the product refer to [www.colorsteel.co.nz](http://www.colorsteel.co.nz).

## SOURCES OF INFORMATION

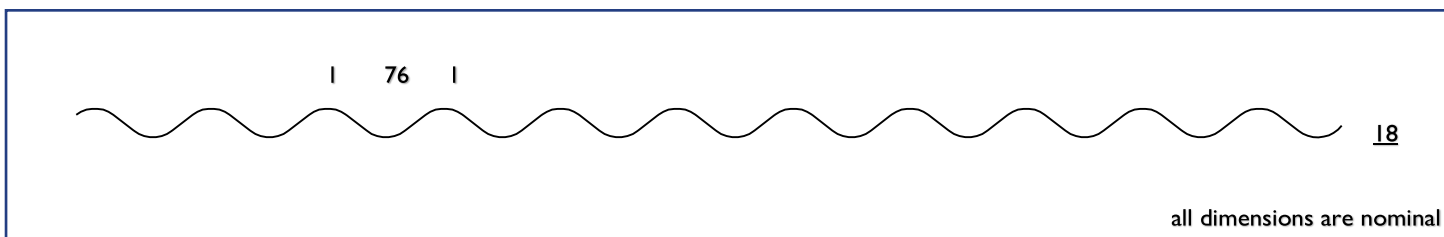
- › AS/NZS 1170:2002. *Structural design actions*.
- › AS/NZS 1397:2001. *Steel sheet and strip—Hot-dip zinc coated or aluminium/zinc-coated*.
- › AS/NZS 2728:2013. *Prefinished/pre-painted sheet metal products for interior and exterior building applications*.
- › BRANZ [www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater](http://www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater).
- › NZ Metal Roof Manufacturers (NZMRM): *Code of Practice (V3.0)*.
- › NZ Steel. Technical Bulletin. [August 2016]. *Fire testing. Fire testing of Coated Steel Products*.

For more information visit [www.tarc.co.nz](http://www.tarc.co.nz)

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# Corrugate

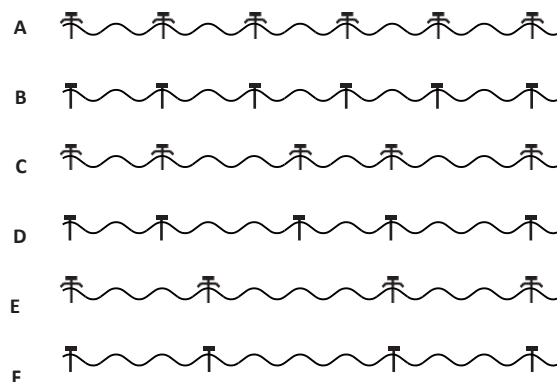
A true icon of Kiwi culture and construction, the Corrugate profile is cost effective, versatile and able to handle a wide range of roofing and wallcladding applications. Corrugate is available in Zinalume, Colorsteel Endura, Colorsteel Maxx, Colorcote Zinacore and Colorcote Magnaflow.



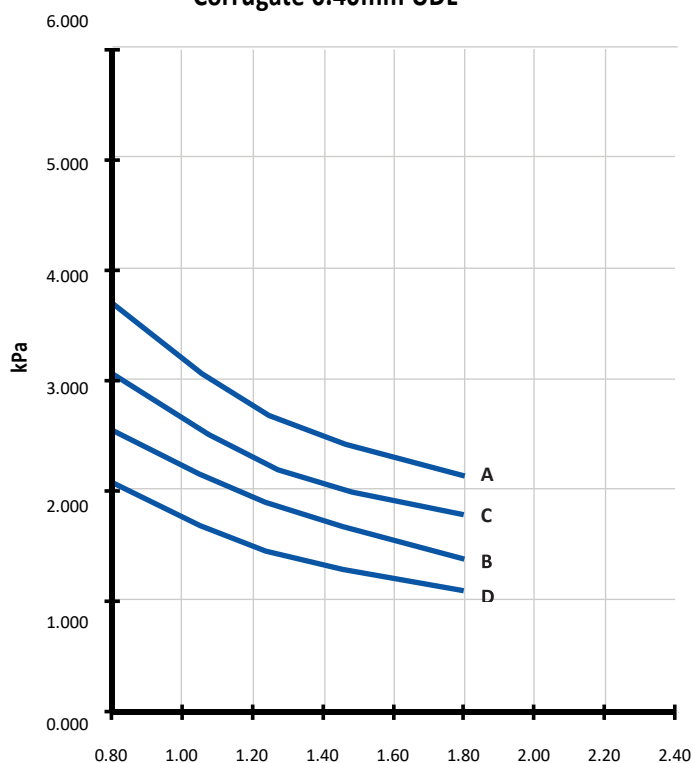
### Recommended Fixings

Timber: 12G x 55mm or 12G x 65mm with load spreading washer  
 Steel: 12G x 45mm or 12G x 55mm with load spreading washer

### Fixing Patterns

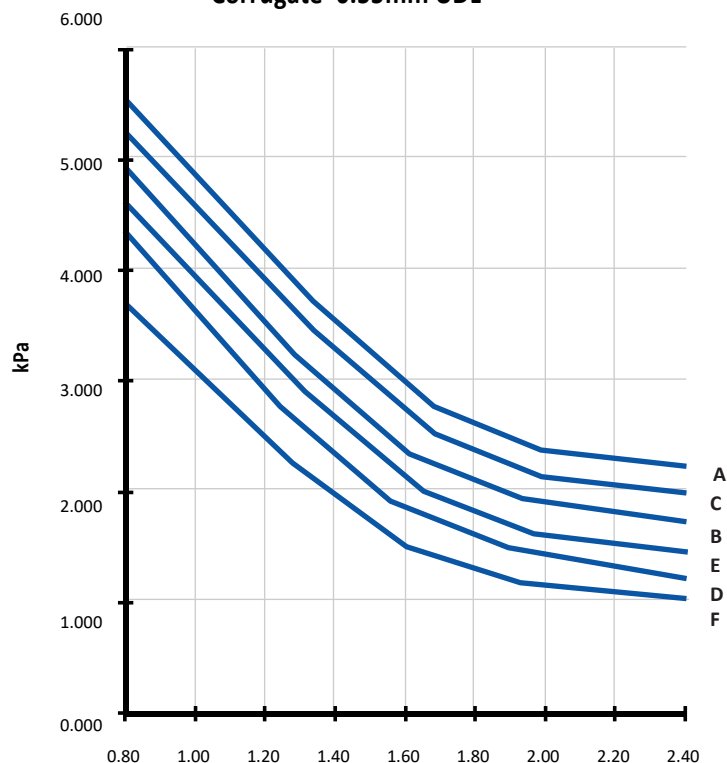


Corrugate 0.40mm UDL



Intermediate Span (m)

Corrugate 0.55mm UDL



Intermediate Span (m)

Note: The intermediate spans shown in the graphs above are based on G550 Steel as the base metal. To calculate end spans please multiply the intermediate span calculated by 0.66. Spans are based on restricted access. For alternative metals please contact our office