

TARC Flat Lock (TFL) Specifications

1. General

This section relates to the supply and fixing of TARC Flat Lock Cladding, complete with accessories.

1.1. Abbreviations and definitions

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

- BMT Base metal thickness
- NZMRM New Zealand Metal Roofing Manufacturers Inc
- LBP Licensed Building Practitioner

2. Document

2.1. Documents

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

- NZBC C/AS1-AS7 Protection from fire
- NZBC E2/AS1 External moisture
- NZBC G12/AS1 Water Supplies
- AS/NZS 1170.2 Structural design actions - Wind actions
- AS 1397 Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminum and magnesium
- AS/NZS 2728 Prefinished/pre-painted sheet metal products for interior/exterior building applications - Performance requirements
- NZS 3604 Timber-framed buildings
- NZMRM COP NZ Metal Roof and Wall Cladding Code of Practice.

2.2. Manufacturer/supplier documents

Manufacturer and supplier's documents relating to this part of the work: The Architectural Roofing Company Ltd. literature, including: Product Guide Product Technical Statements Design Solutions.

- NZ Steel: Specifiers and Builders Guide
- NZ Steel: Installers Guide
- Ecoply: Structural Plywood Properties & Application Manual
- Manufacturer/supplier contact details Company: The Architectural Roofing Company Ltd.
- Web: www.tarc.co.nz Email: info@tarc.co.nz Telephone: (03) 335 0462

Warranties: A sample cladding warranty showing terms and conditions, and information on maintenance requirements is available from The Architectural Roofing Company. Ph (03) 3350 462 or on website www.tarc.co.nz.

2.3. Warranty - manufacturer/supplier

Provide a material manufacturer/supplier warranty: 15 years (minimum) For Perforation 10 years (minimum) For Coatings - Provide this warranty on the, The Architectural Roofing Company Ltd. standard, Warranty Plus warranty form. - Commence the warranty from the date of installation.

2.4. Warranty - installer/applicator

Provide an installer/applicator warranty: 5 years for workmanship.

Provide this warranty on the installer/applicator standard form. - Commence the warranty from the date of installation.

Include a copy of the, The Architectural Roofing Company Ltd. maintenance requirements with the warranty. Refer to the general section 1237 WARRANTIES for additional requirements.

3. Requirements

3.1. Qualifications

Roofers to be TARC recommended Installers

3.2. No substitutions

Substitutions are not permitted to any specified TARC products, or associated components and products.

3.3. Fixings, wind

Use the fixings appropriate for the design loads of this site as required by NZS 3604 and AS/NZS 1170.2. Allow for specific loadings at corners and the periphery external corners of the cladding, where localised pressure factors apply. Contact The Architectural Roofing Company Ltd. for advice.

3.4. Spread of fire

To NZBC C/AS1-AS7, 5.8.2 a) Exterior Surface Finishes.

3.5. Co-ordinate

Co-ordinate to ensure substrate and preparatory work is complete and other work programmed in the order required for access and completion of the cladding. Ensure that all necessary members are positioned so that flashings can be fastened at both edges through the cladding to the primary structure.

3.6. Performance

Install cladding material and associated flashings and accessories to form a weather tight and durable system.

4. Products/materials

4.1. Plywood substrate

15mm minimum plywood sarking (such as Ecoply Roofing Grade F11, DD finish ply) and to NZMRM CoP 11.4.2, Substrate. Refer to TARC Product Technical Statement and Ecoply: Structural Plywood Properties & Application Manual for technical information.

4.2. Wall underlay

Refer to 4161 UNDERLAYS, FOIL AND DPC. Breather, absorbent type underlays to NZS 2295.

4.3. Aluminium/zinc alloy coated steel, unpainted

Formability G300 steel sheet coated to AS 1397. Coating class: AZ 150.

4.4. Pre-finished aluminium/zinc alloy coated steel

Formability G300 steel sheet coated to AS/NZS 2728. Coating class: AZ 150

4.5. Pre-finished hot-dipped aluminium/zinc/magnesium coated steel

Formability steel sheet, G300 for roll forming.

4.6. Aluminium 5005 or 5052

Alloy H34 or H36 temper to suit application.

4.7. Stainless steel

Strip grade 445M2.

4.8. Copper

Half-hardened commercial finished. Refer to SELECTIONS for surface finish.

4.9. Zinc

Natural or pre-weathered zinc. Refer to SELECTIONS for surface finish.

4.10. TARC Profiles

Refer to SELECTIONS for profile and pan widths.

4.11. Flashings generally

To E2/AS1, 4.0, Flashings. Formable grade 0.55mm BMT for galvanized, aluminium/zinc-coated and pre-painted steel, and 0.90mm for aluminium (or 0.7mm for small aluminium flashings) to the same standards as the profiled sheets, notched where across profile. Where flashings are required but are not detailed, design to TARC's approved recommendations and designs.

5. Components

5.1. Fasteners generally

Minimum Class 4 and durability not less than the cladding material being fixed. Fastener material to be compatible with the material being fastened.

5.2. Fixing clips

Galvanized steel (thermoplastic powder coated or stainless steel for aluminium, copper or zinc) to suit the material and profile of the rigid sheet and location as required by TARC. Fix to sarking with 25mm x 2.5mm angular groove stainless steel nails.

5.3. Fixing screws

Appropriate nails to the cladding material, clip type and the supporting structure, as required by the TARC and with a minimum Category 5 durability and not less than the material being fixed.

5.4. Rivets

Sealed aluminium, minimum diameter 4mm, for use with zinc coated, zinc/aluminium coated or aluminium roofing.

6. Accessories

6.1. Sealant

Neutral curing silicone or MS polymer sealant as required by TARC and used as directed. For VM Zinc use only Sikaflex 11FC.

7. Execution

Conditions

7.1. Inspection

Inspect the sub framing and supporting structure to ensure that it is complete and fully braced ready for cladding and free from any misalignments or protrusions that could adversely affect the cladding.

7.2. Framing timber moisture

For transverse flashings the framing moisture content to be a maximum of 18%. Transverse flashings can be temporarily tacked in place and final fixing done when moisture content is acceptable.

7.3. Storage

Take delivery of and accept packs of cladding undamaged on delivery. Reject all damaged material. Stack cladding and accessories on clean, level areas of the site and protect from mechanical damage, wind damage and contamination. Loosely cover dry sheeting, with any wet sheeting fillet or cross stack to allow air to circulate. Remove strippable protective film, if applied, prior to prolonged exposure to sunlight.

7.4. Handling

Avoid distortion and contact with damaging substances, including cement. Do not drag sheets across each other and other materials. Protect edges and surface finishes from damage.

7.5. Separation

Place isolators between dissimilar metals and separate cladding from treated timber and cement based materials. Do not use unpainted lead sheet or copper in contact with or allow water run-off onto galvanized or Zinalume® materials.

7.6. Plywood substrate

Install plywood substrate in accordance with CHH's: "Ecopoly: Structural Plywood Properties & Application Manual."

8. Application

8.1. Set-out

Carefully set out the planned layout before fixing commences, to ensure true lines and the correct relationship to module. Check during fixing to eliminate creep or spread.

8.2. Avoid damage

Take care to avoid damaging pre-finished panels during fixing.

8.3. Marking and cutting profiled metal cladding

Use ink pen, chalk line or coloured pencil for marking sheets prior to cutting. Do not use black lead pencil for marking aluminium/zinc-based products. Cut by shear only, using nibblers or hand snips.

8.4. Installing profiled metal cladding

Install and fix in accordance with NZ Steel's Installers Guide, NZMRM CoP and to TARC current product literature. Use only fixings as required by TARC.

Fix sheets in place into 15mm plywood substrate (such as Ecoply Roofing Grade F11, DD finish ply), with breather type underlay, using TARC clips secured with 8g 25mm x 2.5mm annular groove stainless steel nails, (clips and screws to be of compatible material). Clips to be fastened to ply at typically 300mm centres using TARC fixed clips for Flat Lock profiles. Consult TARC for recommended fixing centres and layout. Make provision for due allowance for dynamic local wind pressures on building and thermal movement in sheet.

Plywood substrate to be installed in accordance with Ecoply: Structural Plywood Properties & Application Manual.

8.5. Fixings

Refer to the TARC manufacturer's literature for fixing details, taking care in the higher wind uplift areas at ridges, edges and verges.

8.6. Install flashings and capping's

Flash neatly to all penetrations and openings through cladding using secret clip systems avoiding visible fastenings. Flashing design and installation to TARC Design Solutions.

8.7. Flashing penetrations

Flash all penetrations through the cladding. Fit pipe flashings with a proprietary collar flashing through pan of TARC profile only. Other penetrations flash as detailed and to provide a weathertight installation.

8.8. Use of sealants

Select and use sealants only as recommended by the manufacturer. Apply sealant in two narrow beads transversely across flashing intersections, close to the two edges. Avoid exposing sealant on outside surfaces.

8.9. Remove filings

Remove metal filings from roofing surfaces at least daily.

9. Completion

9.1. Replace

Replace damaged or marked elements. Do not attempt to repair coatings by applying colour match paint to pre-finished surfaces.

9.2. Leave

Leave this work complete with all necessary flashings, all properly installed as the work proceeds so the finished cladding is completely weathertight.

9.3. Remove

Remove trade rubbish and unused materials from the site and surrounds daily leaving the site safe and clean for all other trades. Remove any protective strippable film as soon as possible. Do not leave product exposed with strippable film for more than one week.

9.4. Selections

For further details on selections go to www.tarc.co.nz, Substitutions, are not permitted to the following, unless stated otherwise.

10. Coating System

10.1. Coating system - exposure zone b-c (cat 1-3)

Project Exposure Zone B-C to NZS 3604, C 1-3 to ISO 9223.

- Profile/location: ~
- Base material: ~
- Coating system: ~
- Coating colour: ~

10.2. Coating system - exposure zone d (cat 4)

Project Exposure Zone D to NZS 3604, C 4 to ISO 9223.

- Profile/location: ~
- Base material: ~
- Coating system: ~
- Coating colour: ~

10.3. Coating system - exposure zone e (cat 5)

Project Exposure Zone E to NZBC E2/AS1, C 5 (C5I & C5M) to ISO 9223.

- Profile/location: ~
- Base material: ~
- Coating system: ~
- Coating colour: ~

11. Cladding Flat Lock

11.1. TARC Flat Lock (TFL)

- 4.6.1 BMT/material: 0.55mm
- Pan width: 100mm to 330mm
- Clips: TARC Fixed Clips
- Substrate: Plywood

12. Accessories

12.1. Flashings - generally

- BMT/material:
- Coating system: To match cladding
- Coating colour: To match cladding