TECHNICAL NOTE
August 2022

ECOPLY® ROOFING PRODUCT RANGE CHANGE

INTRODUCTION

As a part of continual development processes across the Carter Holt Harvey Plywood Ltd (CHH Ply) range, CHH Ply has reviewed the production processes, relative stiffness and performance of the Ecoply Roofing range and is changing from manufacturing 15mm and 17mm F11/F8 towards a single, 17mm F8/F5 plywood of alternate construction. This new product will exceed the performance requirements of the current in-market roofing specification. It should be noted that due to the additional thickness there is an increase in the weight of each sheet by 0.9kg/m^2 (2.9kg for a 2700x1200 sheet) when compared to the previously supplied 15mm Ecoply Roof product.

This Technical Note details the changes and application of the Ecoply Plywood Roofing range including Section Properties, Product Identification and Specification and Installation requirements.

SECTION PROPERTIES

Table 1. Nominal Stiffness and Strength of Ecoply® Roofing Plywood range, denotes the relevant structural properties for both 15 and 17mm F11/F8 products manufactured prior to August 2022 and the new 17mm F8/F8 Ecoply roofing product. In all cases the new construction demonstrates improved structural properties in the parallel to the face grain direction, whilst exhibiting reduced structural properties in the perpendicular to the face grain direction. For Specific Engineering Design (SED) projects engineers will need to confirm the suitability of the plywood as appropriate for their design.

Table 1: Nominal Stiffness and Strength of Ecoply® Roofing Plywood range

			Nominal Strengths (Limit States) per mm width					
			Parallel to the face grain (F11)[3]			Perpendicular to the face grain (F8) [3]		
Nominal plywood thickness[1] (mm)	**ID code**[2]	**Mass** (kg/m^2)	**Bending Stiffness EI** (1000 mm^2)	**Bending Moment $f_{pb}Z$** (Nmm)	**Rolling Shear $f_{pr}I/Q$** (N)	**Bending Stiffness EI** (1000 mm^2)	**Bending Moment $f_{pb}Z$** (Nmm)	**Rolling Shear $f_{pr}I/Q$** (N)
Ecoply Roofing Range (Manufactured prior to August 2022)								
15	15-30-5	8.3	2362.5	926.9	20.9	593.3	362.5	11.4
17	17-24-7	9.2	2992.5	1050.9	22.0	1110.2	510.0	15.9
Ecoply Roofing Range (Manufactured from August 2022)								
			Parallel to the face grain (F8)[3]			Perpendicular to the face grain (F5) [3]		
17	17-38-5	9.2	3343.0	1050.0	22.2	585.1	211.4	10.7

1. Actual thickness of Ecoply sheets manufactured to thickness tolerances stated in AS/NZS 2269
2. Identification code: panel thickness – outermost veneer thickness x 10 – number of plies
3. Characteristic Structural Properties as for F Grades sourced from AS/NZS 2269.0:2012

As displayed in Table 1, CHH Ply's 17-38-5 F8/F5 plywood has an increased stiffness of 41% and 16 % respectively when compared to 15mm F11/F8 (15-30-5) and 17mm (17-24-7) F11/F8 Ecoply plywood roofing.

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PRODUCT IDENTIFICATION

In accordance with AS/NZS 2269, Ecoply Structural Plywood sheets have the following information marked on the back (Untreated 21mm F8/F5 shown as an example):

• Brand name: e.g. ECOPLY • Face grade, back grade: eg. CD • Intended application: e.g. STRUCTURAL • Nominal Thickness: eg. 21- • The values of second moment of area (moment of inertia) (I) and section modulus (Z) in the grain orientations to which the properties are declared: eg. 626.2, 58.6/191.7,25.4 • Glue bond: e.g. A BOND • Formaldehyde emission class: E0 for A Bond Ecoply • Australasian Standard: e.g. AS/NZS 2269 • Treatment Standard (if applicable): e.g. AS/NZS 1604.3:2012 • Date and time of manufacture: e.g. 01/12/15 12:23:45 • Stress grade: e.g. F8/F5 • The Engineered Wood Products Association of Australasia (EWPAA) brand and mill number: e.g. 911 (Tokoroa mill)	Ecoply CD Structural 21-(626.2, 58.6/191.7,25.4) A Bond EO AS/NZS 2269.0:2012 Operator /Date /Time F8/F5 EWPAA 911

SPECIFICATION & INSTALLATION

The revised 17mm F8/F5 Ecoply Structural Roofing Plywood can be specified and installed in accordance with the product specific usage requirements for both nominal 15 and 17mm F11/F8 plywood as detailed in the ECOPLY® SPECIFICATION & INSTALLATION GUIDE as appropriate. Where the Ecoply Structural Plywood products form part of a Specific Engineering Design (SED) solution refer to the structural engineer for further details.

CONCLUSION

Ecoply Structural Roofing Plywood products will only be manufactured in 17mm F8/F5 (17-38-5) from August 2022. The span tables and installation requirements detailed in the ECOPLY® SPECIFICATION & INSTALLATION GUIDE for both 15 and 17mm F11/F8 Stress Grade remain applicable for the new 17mm construction. For SED projects engineers will need to confirm the suitability of the plywood as appropriate for their design. Due to the additional thickness there is an increase in the weight of each sheet by 0.9kg/m^2 (2.9kg for a 2700x1200 sheet) when compared to the previously supplied 15mm Ecoply Roof product, whilst being the same weight as the previously offered 17mm Ecoply Roofing.

REFERENCES

- ECOPLY® SPECIFICATION & INSTALLATION GUIDE
- AS/NZS 2269:0:2012 "Plywood Structural"
- NZS 3603:1993 "Timber Structures Standard"

LIMITATIONS

The information contained in this document is current as at August 2022 and is based on data available to CHH Ply at the time of going to print. CHH Ply reserves the right to change the information contained in this document without prior notice. It is important that you visit www.chhply.co.nz or call 0800 326 759 to confirm that you have the most up to date information available.

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