acrow.
ENGINEERING & CONSTRUCTION

PRODUCT & INSTALLATION GUIDE
UNI-MESH FR2

HARDWARE

Any safety provisions as directed by the appropriate governing agencies must be observed when using our products. The pictures in this document are snapshots of situations at different stages of assembly, and therefore are not complete images. For the purpose of safety, they should not be deemed as definitive.

The loads featured in this document, related to the parts of the product, are approximate.

The company reserves the right to introduce any modifications deemed necessary for the technical development of the product.

Product & Installation Guide Release Notes

This page is intended to record all changes to the **Uni-Mesh FR2** product & installation guide pages.

Changes or additions to this manual will be itemised with a brief description and date when the amendments were made.

ISSUE	DATE	Amendment Description
A	03/24	First Release

Contents

1. Technical Specifications

Product Description

Uni-Mesh FR2 is a steel wire-reinforced containment mesh that serves as a control measure against falling objects within a scaffold bay and other elevated working platforms.

Uni-Mesh FR2 features a durable 50x50mm grid comprising of a 9mm strip that has impregnated wire strands. These strips are sandwiched together with a shade cloth material between them.

Purpose of the Document

The purpose of this document is to provide guidelines for safe handling, transport and installation of **Uni-Mesh FR2**.

The document also outlines the various components of the system and it features illustrations, working load limits, typical assembly arrangements and safe transport and handling measures.

The information contained in this document is provided as a general guide only and does not replace the need for the design to be reviewed and checked by a qualified person in the field of temporary works design and installation, concrete, steel, building construction and services.

This material has been prepared in the context of relevant Australian Standards and the National Construction Code (NCC). Users should make themselves aware of any recent changes to these documents referred to therein and to local variations or requirements.

This document is NOT a substitute for site-specific Safe Operation Procedures. It is the Installation Contractors responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards and policies.

Acrow Formwork and Scaffolding has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to specify and document these systems. Our technical experts can identify the most efficient temporary work design meeting project requirements, specifications and installation process.

Should the users require any further information or guidance, they are encouraged to contact their local Acrow Formwork & Scaffolding Pty Ltd branch.

Safety Information

This safety information is to draw the user's attention to possible musculoskeletal disorders as a result of manual handling during assembly and dismantling of the **Uni-Mesh FR2** system

It is recommended that users of the **Uni-Mesh FR2** system employ and implement appropriate procedures and control measures to eliminate or control any risk of Musculoskeletal disorder/injury while handling.

Refer to the Code of Practice on manual handling published by local Workcover Authority or other approved and recognized guidelines for correct and appropriate manual handling procedures.

1. Technical Specifications

Important Information

The erection and application instructions contained in this manual are the recommended methods to be used for **Uni-Mesh FR2** products.

The technical related instructions must be accurately followed to obtain the correct performance of the product. Any deviation from the recommended usage will require a separate design and/or verification by Acrow Engineering.

The illustrations in these assembly configurations are a minimum guideline only.

The combined use of the **Uni-Mesh FR2** system with containment & fixing equipment from other suppliers may entail performance issues and therefore requires a design check and/or verification by Acrow Engineering or a qualified experienced engineer.

Hazard Identification/Risk Assessments for the erection and dismantling of the system are available from Acrow branches. Site specific Hazard and Risk assessments may need to be generated for specific projects.

Disclaimer

The guidelines provided in this document are limited to the relevant codes nominated below. It does not include certification of any structures or works associated with a project.

Applicable Codes and Standards

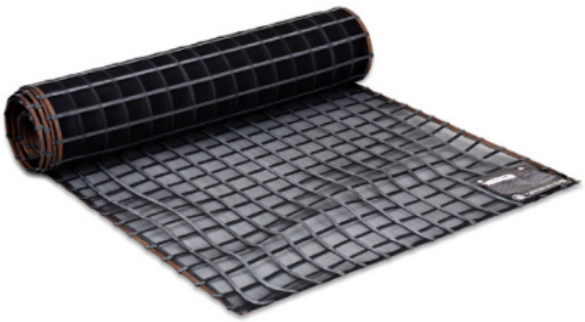
Uni-Mesh FR2 is tested in compliance with:

- QLD Work Health and Safety Regulation (WHSR) 2011, Regulation 315D
- AS2001.2.4 (Methods of test for textiles - Physical tests - Determination of bursting pressure of textile fabrics - Hydraulic diaphragm method).
- AS1530.2 Methods for Fire Test on Building Materials, Components and Strucutre. Part 2: Test for Flammability of Materials
- AS 1576.7 (Interim) 2021 Scaffolding, Part 7: Safe use of encapsulation on scaffolding
- AS 4576:2020, Guidelines for scaffolding

2. GENERAL PRODUCT INFOMATION

2. General Product Information

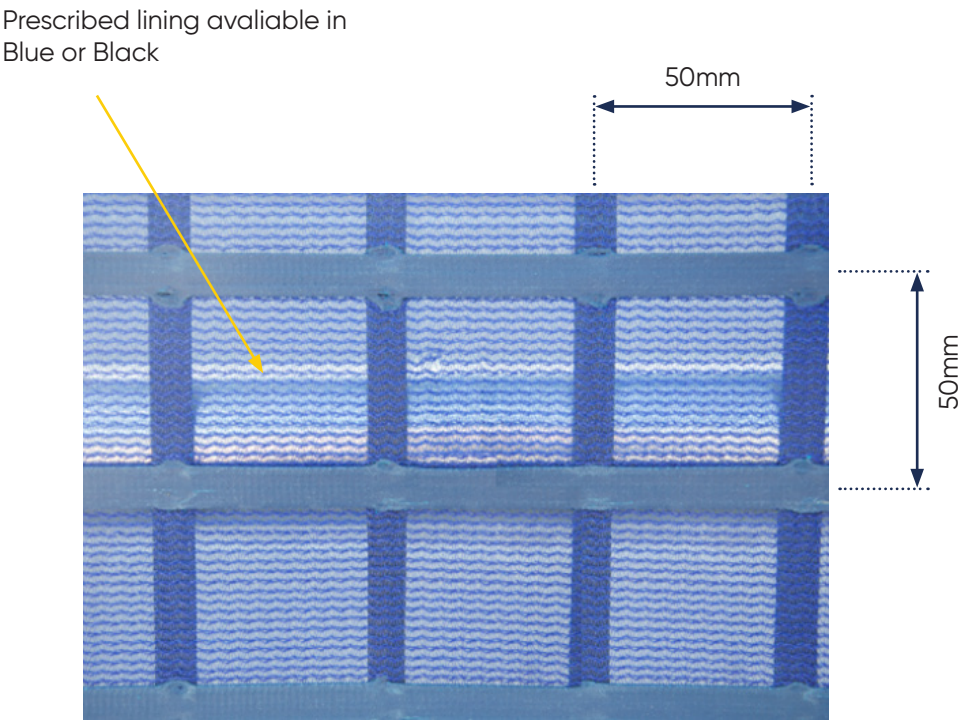
Uni-Mesh FR2

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (KG) (NOM.)
	**Uni-Mesh FR2** A steel wire-reinforced scaffold mesh serves as a control measure against falling objects. It features a durable 50mmx50mm grid comprising of a 9mm strip that has impregnated wire strands, these strips are then sandwiched together with a prescribed lining material between them. Uni-Mesh FR2 is designed for easy installation and re-use in mind.		
	Black 0.3 x 10m Roll	UMFR203BK	2.50
	Black 0.95 x 10m Roll	UMFR295BK	7.95
	Black 1.9 x10m Roll	UMFR219BK	15.9
	Blue 0.95 x 10m Roll	UMFR295BU	7.95
	Blue 1.9 x 10m Roll	UMFR219BU	15.9

3. SYSTEM DETAILS

3. System Details

Uni-Mesh FR2 Details



4. INSTALLATION DETAILS

4. Installation Details

Installation Process

The purpose of this section is to provide guidelines for installation and removal of the Uni-Mesh FR2. This should be used as a guide only, it is the contractors responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards and policies.

Acrow has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to use Uni-Mesh FR2. Our technical experts can identify the most efficient temporary work design meeting project requirements, specifications and installation process.

Should the users require any further information or guidance, they are encouraged to contact their local Acrow branch.

Guidelines for installing Uni-Mesh FR2

Uni-Mesh FR2 must be installed by a qualified and competent person, the fixing (Installation) of Uni-Mesh FR2 is govern by Australian Standard AS 4576:2020, Guidelines for Scaffolding.

Clause 7.10.4 provides guidelines for fixing encapsulation to a scaffold and are as follows:

- On tube-and-coupler scaffolds, ensure that transoms and putlogs do not project more than 150 mm over the outside ledger. Cap or pack around ends of tubes in contact with encapsulation.
- Use fully decked platforms with guardrails while erecting encapsulation.
- Encapsulation should be fixed to the inside of the scaffold at each level, unless otherwise specified in the design.
- Encapsulation should be effectively continuous by using sufficient overlap.
- Tightly tie butt joints if overlap is not possible.
- Ensure that encapsulation is sufficiently taut and fixed tight against the scaffolding to prevent chafing.
- Where encapsulation has inbuilt fixing points, ensure that the layout and position of these points is compatible with the scaffolding framework.
- Ensure that encapsulation is in direct contact and tied back to the open edges of the platform and guardrails.
- Ensure that there are as few gaps as possible between encapsulation and the platform edge.

4. Installation Details

Prior to Installation of Uni-Mesh FR2

Prior to commencing the installation of Uni-Mesh FR2, ensure that the fully decked platform is braced and stable or tied into the concrete slab or adjacent structure, following the project-specific construction drawings.

Free-standing scaffolds have the potential to overturn or twist, regardless of their height. Therefore, it is essential that scaffold towers be tied to a solid foundation, adjacent building, or suitable structure to prevent inward or outward movement of the scaffold. This ensures stability and enables the effective performance of the scaffold structure as it grows in height and length. Installing Uni-Mesh FR2 on a free-standing structure increases the risk of overturn or twist due to the additional wind load imposed on the scaffold structure and scaffold must be designed accordingly.

Face bracing of the scaffold structure

Raker bracing of the scaffold structure or ties to the building as speccified by the engineer in the scaffold project specific documentation

4. Installation Details

Tying Uni-Mesh FR2 onto the Scaffold Structure

- Tie the Uni-Mesh FR2 on the scaffold structure (ledgers) using heavy-duty cable ties (Zip Ties) with a tensile strength of at least 110kg. Ensure that the cable ties are suitable for outdoor use and are UV resistant.
- Tying should be performed progressively while rolling out the Uni-Mesh FR2 roll.
- Insert the cable tie from inside the scaffold, through the Uni-Mesh FR2 and underneath the ledger. Then roll it over the ledger and insert it again through the Uni-Mesh FR2 and above the ledger.
- During the process, ensure the cable tie secure the horizontal reinforced 9mm strip of the Uni-Mesh FR2.
- Tie the cable tie and cut off the excess tail (ensure these is no sharp edge exposed).

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Step 8

4. Installation Details

Installing the Uni-Mesh FR2

Step 1 - Position the roll upright

- Ensure that the deck is clear and stand the roll of Uni-Mesh FR2 upright with the free edge closest to the standard.

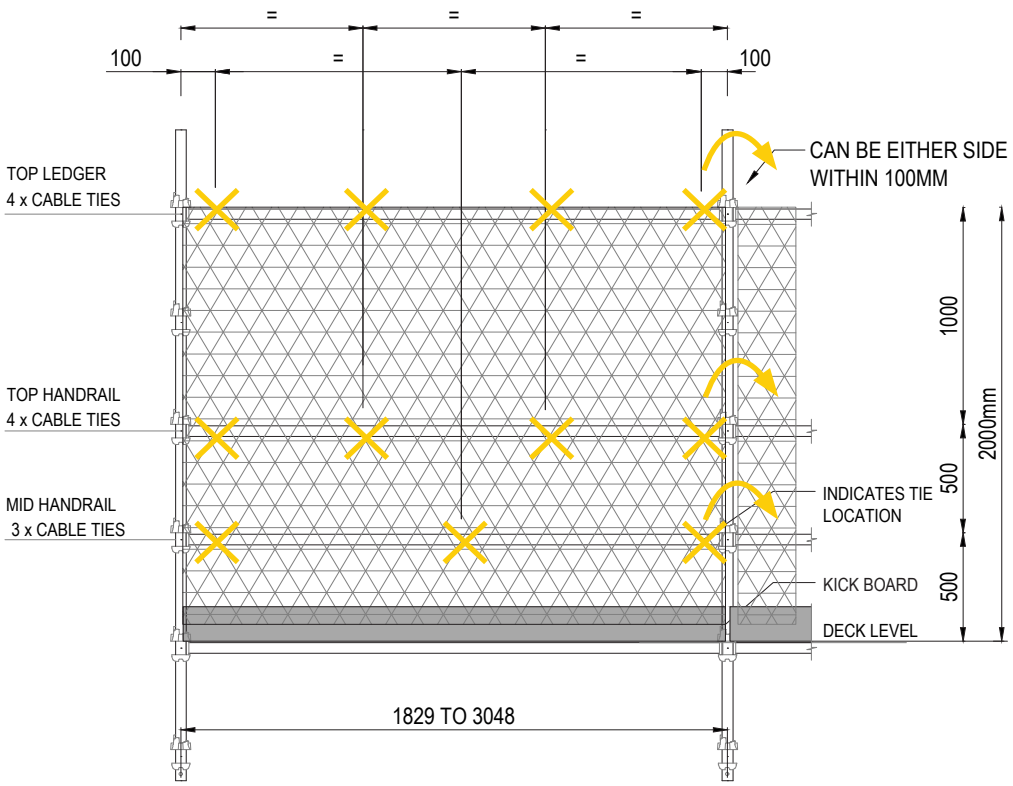
Step 2 - Attach the Uni-Mesh FR2 to at least 3 points when starting

- For the start of the roll, fix the Uni-Mesh FR2 to ledgers in 3 locations (Top ledger, handrail and mid handrail) within 50mm of the standard.
- Ties located at 1a, 1b and 1c.

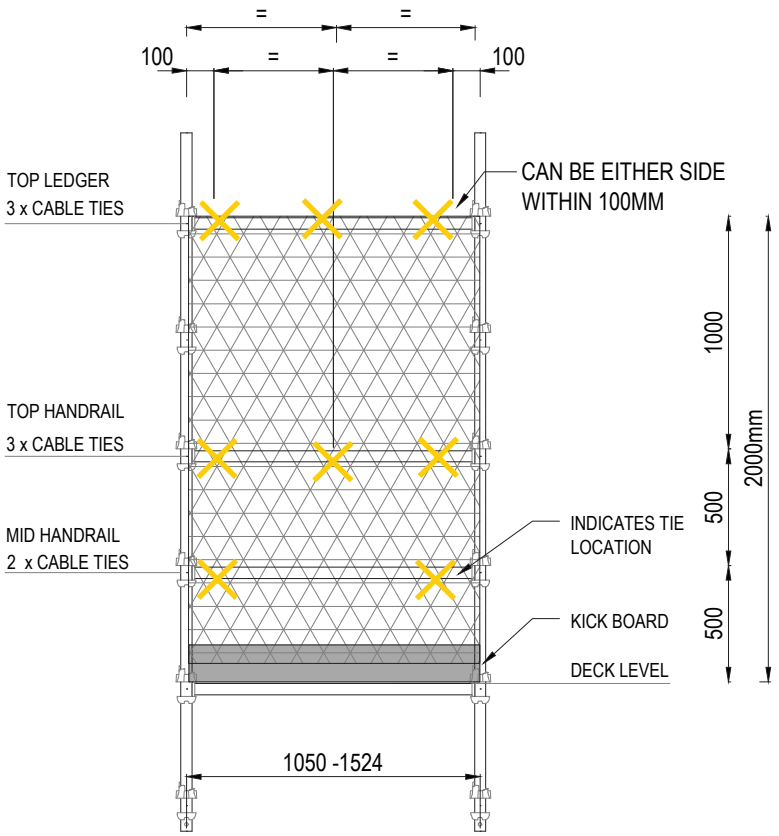
4. Installation Details

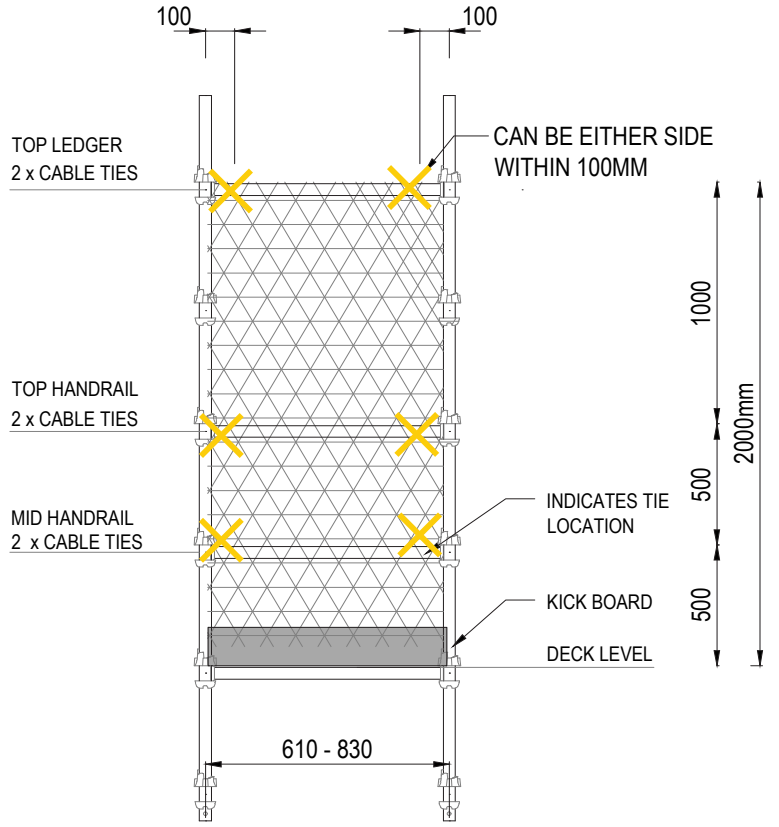
Step 3 - Roll out of the Uni-Mesh FR2

- Once the three points of contact are fixed, begin to roll out the Uni-Mesh FR2 and start tying it to the ledger following the sequences below.
- Always start by fixing the Uni-Mesh FR2 into the top ledger first, then proceed downwards (handrail and mid handrail).



4. Installation Details





4. Installation Details

Step 4 - Proceed to next Scaffold Bay

- Continue rolling out the Uni-Mesh FR2 into scaffold mid bays and follow steps 1 - 3 again to complete the full roll.

Step 5 - Wrap Uni Mesh FR2 into the End Bay

- Fix the Uni-Mesh FR2 into the top transom and handrails using cable ties as per below sequence.
- If excess material remains, cut down to suite required length.

4. Installation Details

Un-Installing and Rolling Up Uni-Mesh FR2

Step 1 - Remove ALL fixtures (cable ties) except the ones on the top rail

- Ensure the correct tools are used to remove the fixtures to limit damage to the mesh within the product.
- Uni-Mesh FR2 must NOT be pulled off the structure whilst cable ties are in place, as this will damage the product.

Step 2 - Start removing top ties and roll up the Uni-Mesh FR2

- Once all but the top ties are removed, you can begin to roll up the product.
- Cut only one top cable tie at a time.

4. Installation Details

Step 3 - Roll the Uni-Mesh FR2 up to the next top tie

- Remove next cable tie to continue rolling up the Uni-Mesh FR2, this will ensure the roll is tight and easily transported.
- Once last tie from the side of the bay has been removed you may start rolling it to the next cable tie along the bay. Once tie has been removed, roll the Uni-Mesh FR2 up to the next available cable tie (4).

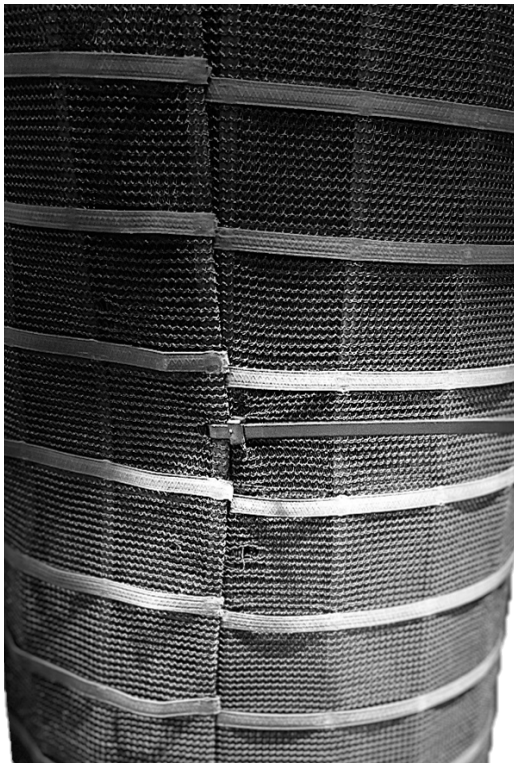
Step 4 - Use foot while rolling the Uni -Mesh FR2

- It is recommended to use your foot to brace the bottom of the Uni-Mesh FR2 to ensure conformity of the roll. When reaching the next tie, it can now be removed. Continue this process untill you reach the end of the roll.

4. Installation Details

Step 5 - Secure the Roll

- Once the last tie has been removed, you can secure the roll by using cable ties or tie-wire.



4. Installation Details

5. TRANSPORT & HANDLING

5. Transport & Handling

How to Move Uni-Mesh FR2

Uni-Mesh FR2 is light enough to be carried by one person.
To prevent damaging the Uni-Mesh FR2;

- Under no circumstances should the product be dropped from height.
- Uni-Mesh FR2 must not be dragged along the ground to prevent the shade cloth from tearing.

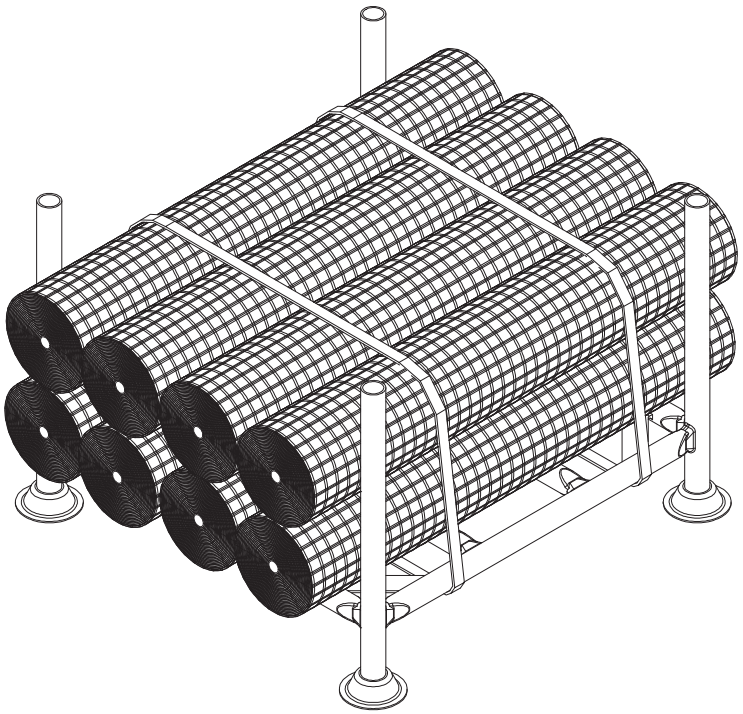
How to Store Uni-Mesh FR2

It is recommended that Uni-Mesh FR2 is rolled up and stored in pallets/stillages and kept out of the sun to prevent UV damage to the plastic.

It is a natural characteristic of plastic to degrade and fade when exposed to the sun for an extended period of time. In order to enhance the lifespan of the product, undercover storage is recommended when Uni-Mesh FR2 is not in use.

The Acrow stillage is used to store a set number of items per a stillage. Items should be stored in a particular way to prevent them from falling off the stillage. When a stillage is not used, ensure items are bundled and placed on suitable dunnage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage.
- Ensure every stillage load does not exceed height of stillage per the advised image below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



6. INSPECTION

6. Inspection

Inspection Checklist

The following checklist will assist in the successful installation and effectiveness of the Uni-Mesh FR2 scaffold containment.

Parts of the checklist have been extracted from the Australian Standard AS 4576:2020, Guidelines for Scaffolding, Appendix E

REQUIREMENTS	Y/N	COMMENTS	EXPLANATORY NOTES
DESIGN DOCUMENTATION			
Installers have the project specific scaffold structural design documentations and all scaffold is installed, braced and tied as per the drawings. Ensure drawings specifiy continament is installed.			Scaffolds fitted with encapsulation have increased dead loads and are exposed to increased wind and rain loads. The design of such scaffolds and ties should be checked by a competent person such as an engineer experienced in scaffold design. An example, wind load in certain construction zone may impose the need for an additional ties and bracings to ensure stability of the scaffold structure.
Installer has a copy of Acrow's typical tie fixing of the Uni-Mesh FR2			The robust strength of Uni-Mesh FR2 and suitability for structural scaffold encapsulation applications depends on accurate installation and fixing of Uni-Mesh FR2 into the scaffolds components.
DURING INSTALLATION			
Is correct cable tie being used for fixing? *(Cable tie with a tensile strength of at least 110kg)*			The robust strength of Uni-Mesh FR2 FR2 and its suitability for structural scaffold encapsulation applications are conditional on using a cable tie with a tensile strength of at least 110kg
Are the fixing ties secure?			Insecure fixings may enable part of the encapsulation to break free resulting in a flapping effect on the scaffold that may overload the ties to the permanent structure.
Are there any rips or tears?			Rips or tears will enable materials to escape from the scaffold. If overlap joints are not tightly closed objects may escape from the working platform.
Are the overlap joints satisfactory?			If overlap joints are not tightly closed objects may escape from the working platform.

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7. Appendices

Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

INFRASTRUCTURE TECHNOLOGIES
www.csiro.au

Flammability Tests On UNI-MESH™ FR2 Fire retardant Scaffolding Encapsulation in Accordance with AS1576.7 (Int):2021

Fire Testing Report

Author: Joe Abraham
Report Number: FE3173-RPT-01
Quote Number: FE3173

Date: 21 November 2023
Version: Revision B final

Client: Acrow Formwork and Scaffolding Pty

Commercial-in-confidence

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

Enquiries

Enquiries should be addressed to:

Team Leader, Fire Engineering

Infrastructure Technologies
Private Bag 10, Clayton South
Victoria-3169, Australia
Telephone +61 3 9545 2587

Author

Infrastructure Technologies
Private Bag 10, Clayton South
Victoria-3169, Australia
Telephone +61 3 9545 2587

Client

Acrow Formwork and Scaffolding Pty
280 Bilsen Rd, Geebung QLD 4034

Test Report Details

Document: Fire Testing Report

Test Standard: AS1576.7 (Int):2021 & BS 7955:1999

Client: Acrow Formwork and Scaffolding Pty

Quote Number: FE3173

Test Report Status and Revision History

VERSION	STATUS	DATE	DISTRIBUTION	COMMENT	FORMAT
Revision A	Draft for internal review	03 November 2023	CSIRO	CSIRO	Word
Revision B	Final for issue	21 November 2023	CSIRO;	CSIRO	Pdf

Test Report Authorisation

AUTHOR	REVIEWED BY	AUTHORISED BY
Joe Abraham	Alex Webb	Alex Webb
		
21 November 2023	21 November 2023	21 November 2023

Use of this Report

Use of Reports – Testing

This report is subject to binding obligations under which it was prepared. In particular, the Report must not be used:

- *as a means of endorsement; or*
- *in a company prospectus or notification to a Stock Exchange document for capital raising, without the prior written consent of CSIRO.*

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Excerpts of the Report may not be published without the prior written consent of CSIRO.

Copyright and disclaimer

7. Appendices

Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

1 Summary

CSIRO has been engaged by Acrow Formwork and Scaffolding Pty to conduct Mid-scale Fire tests in accordance with Appendix A of AS1576.7 (Int):2021 on the UNI-MESH FR2™ Fire retardant scaffolding encapsulation.

Sponsored Investigation Report Number: FE3173-RPT-01

Title of Report: Flammability Tests On UNI-MESH™ FR2 Fire retardant Scaffolding Encapsulation in Accordance with AS1576.7 (Int):2021

CSIRO was not responsible for sampling of test specimens. All test specimens were sampled and supplied by Acrow Formwork and Scaffolding Pty.

The results of these fire tests may be used to directly assess fire hazard, but it should be recognized that a single test method will not provide a full assessment of fire hazard under all fire conditions.

2 Test Details

2.1 Sample Identification

See Table 1.

2.2 Sponsor

Acrow Formwork and Scaffolding Pty
280 Bilsen Rd,
Geebung QLD 4034

2.3 Manufacturer

See Table 1.

2.4 Job Number

FE3173

2.5 Test Date & Operator

All the tests were conducted on 23rd October 2023 by Joe Abraham and Alex Webb of CSIRO at CSIRO Infrastructure Technologies Lab, Gate 6, Normanby Rd, Notting Hill VIC 3168.

2.6 Description of Sample

The material description provided in the table below was provided by Acrow Formwork and Scaffolding Pty.

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

Table 1 Material Description

CSIRO specimen ID	Description	Colour	Dimension of the roll
FE3173-1	**Product Name:** UNI-MESH FR2 **Encapsulation Type:** Flexible **Manufacturer Details:** IMAXIA COPORATION **Manufacturer Address:** NO. 68-16 NORTH SHIJIUHU ROAD, GAOCHUN ECONOMIC DEVELOPMENT ZONE, NAHJING CHINA **Description:** The strip of this product is made of color masterbatch, flame retardant raw material, LDPE steel wire and high temperature fusion, the fusion temperature is about 200 degrees Celsius. Strip width is about 9.3mm and 1.45mm thickness. **Batch Number:** 5 **Distributor Name**: Acrow Formwork and Scaffolding Pty **Date of Manufacture:** August 2023	Black	1.9m x 10m

Fixing Method: The specimen was secured by heavy duty zip ties securing corners and mid-point (CSIRO supplied and installed).

3 Method

3.1 Conditioning of Specimens

The specimens were conditioned to constant mass at a temperature of 23 ± 2°C for a period of 7 days prior to testing.

3.2 Test Method

Tests were performed in accordance with the requirements set out for Mid-scale fire tests specified in Appendix A of AS1576.7 (Int):2021[1] Containment nets and sheets on construction works – Specification for performance and test methods. All test specimens were exposed in the horizontal orientation with the standard pilot operating.

All tests were conducted under a smoke collection hood connected to an exhaust fan and pollution scrubbing. The flow rate is set to ensure the ignition source flame is not disturbed by the induced air movement.

Samples were cut to a length of 2.0m from the roll supplied. Where one dimension of the product is less than 2.0m, an additional material was added to the top or one side to make the sample 2.0m x 2.0m.

The fuel was ignited, and a timer was started. The behaviour of the material was observed throughout the tests and for at least 1 min after the heptane stopped burning.

Three replicates of the test were conducted as required by the standard.

A labelling assessment in accordance with Clause 3.2 of AS1576.7:2021 was also conducted.

3.3 Test Method variations

For compliance with Mid-scale fire tests specified in Appendix A of AS 1576.7:2021, sheet material shall be mounted vertically with the centre of the bottom edge positioned so that top of the fuel tray is in contact

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

with the underside of the material. However, the customer specified to test the material with a 150mm gap between the underside of the mesh and the top of the fuel tray as stated in Clause C3.1.3.1 of BS7955:1999[2].

3.4 Test acceptance criteria

The requirements of the mid-scale flammability test are:

a) Flaming on the test sample shall cease not greater than 10s after the heptane stops burning

b) There shall be no flaming droplets or flaming debris 10 s after heptane stops burning

c) No flaming shall reach any edge of the specimen during application of the ignition source

4 Results

4.1 Results of the Flammability Test

The results of tests summarised in the tables below. Photos of the test are given in the table below.

Table 2 FE3173-1 Results of Flammability Tests

Criteria	Acceptance Criteria (s)	Test 1 result	Test 2 result	Test 3 result	Compliance
Duration of flaming on specimen after heptane flameout (s)	10	0	0	0	**Complies**
Duration of flaming droplets or debris after heptane flameout (s)	10	0	0	0	**Complies**
Flaming reached any edge of the specimen	No	No	No	No	**Complies**

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

4.2 Test Photos

Figure 1 FE3173-1 specimen at ignition of heptane tray. t=0s.

Figure 2 FE3173-1 specimen at t = 1 min 37s showing maximum flame height

5 | Flammability Tests On UNI-MESH™ FR2 Fire retardant Scaffolding Encapsulation in Accordance with AS1576.7 (Int):2021 FE3173-RPT-01, Revision B final

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

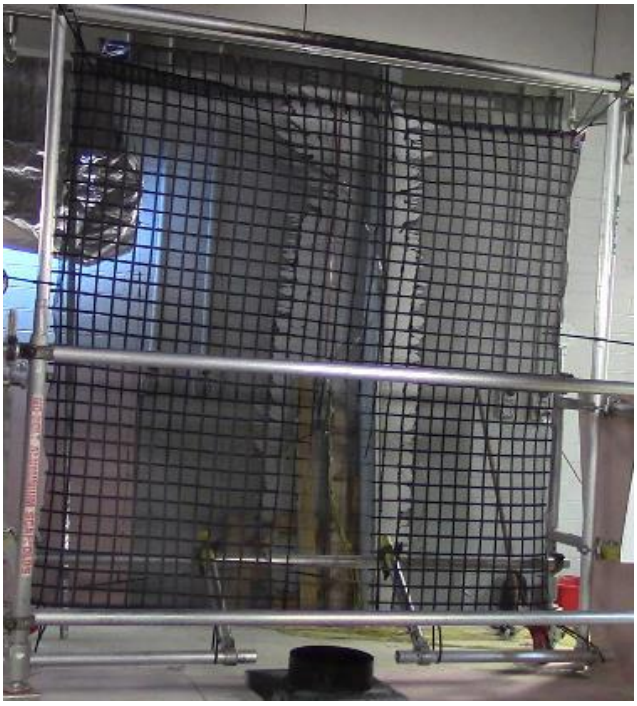

Figure 3 FE3173-1 specimen at t = 6min, 37s. Heptane fuel tray burn out. No flames on the specimen observed.

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

5 Labelling Assessment

The labels attached to the end roll of the encapsulation was assessed against Clause 3.2 of AS1576.7:2021. The results are presented below.

Table 3 FE3173-1 Label Assessment

Criteria	Visible on the label	Compliance
Manufacturer's name or trademark	Acrow	**Complies**
Product Identification	UNI-MESH	**Complies**
Batch Number or Date of Manufacture	Batch No.5, DOM – August 2023	**Complies**

Figure 4 FE3173-1 Image also shows labelling on the product tested.

6 Conclusion

- "UNI-MESH™ FR2" has been tested in accordance with the "Mid-scale Fire Test" as specified in Appendix A of the AS1576.7 (Int):2021. The test was conducted with the 150mm gap between the bottom of the mesh and the top of the fuel tray as a *variation* to the AS1576.7.
- "UNI-MESH™ FR2" complies with the acceptance criteria for the Mid-scale Flammable Test as specified in AS1576.7 (Int):2021 Appendix C.
- An assessment of the label attached to the end of the roll was conducted and was found comply with the criteria specified in Clause 3.2 of AS1576.7 (Int):2021.

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Appendix A - Acrow Scaffolding Encapsulation Flammability Tests on UNI-MESH FR2 Test Report v2, CSIRO

7 References

1. Australia S. (2021) AS1576.7 (Int):2021 - Safe use of encapsulation on scaffolding. Standards Australia; 2021.
2. British Standard B. (1999) BS7955:1999 - Containment nets and sheets on construction works - Specification for performance and test methods. British Standard, BS; 1999.

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Appendix B - Uni-Mesh FR2 Small Scale Fire Test, Compliance with AS1576.7

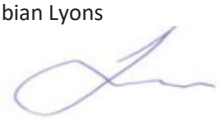
AlfaTest Pty Ltd
A.B.N. 58 096 333 774
PO Box 229, Salisbury QLD 4107
Unit 3/121 Evans Rd, Salisbury, Qld 4107

Phone: (07) 3715 3400
Fax: (07) 3715 3401
Email: info@alfatest.com.au

AlfaTest
"Delivering Results"

FLAMMABILTY TESTING REPORT

AlfaTest Report No:	20231664M01 Re-issue
Date of Test:	10 November 2023
Client Name:	Acrow Formwork & Scaffolding Pty Ltd
Client Address:	280 Bilsen Rd, Geebung, QLD 4034
Client Order No:	320 UNIMESH 191023
Client Job No:	Not specified
Project Details:	Flammability Testing (Small Scale Fire Test) of supplied UNI-MESH FR2
Sample Details as supplied:	Qty 1, Black Uni-mesh/Fire Retardant Flexible Encapsulation Code 7836 Batch No.5 DOM August 2023
Test Specification:	AS 1576.7: 2021 Appendix A, Sec A.2 (a) in accordance with AS 1530.2
Acceptance Specification:	AS 1576.7: 2021 Appendix A, Sec A.6.1 in accordance with AS 1530.2
Compliance:	The results of the testing undertaken on the supplied components comply with the requirements of AS 1576.7 Appendix A, Section A.6.1
Comments:	**This report is to be read in conjunction with AWTA Product Testing, Test No. 23-004358**
Revision No.	1
Revision Date:	11/16/2023
Revision Details:	Product Details amended on page 1.

Reviewed by:	Ellie Rahbar	Approved by:	Fabian Lyons
		Signature:	
		Re-issue Date:	16/11/2023

7. Appendices

Appendix C - Uni-Mesh FR2 Material Flammability Index Certificate

AWTA PRODUCT TESTING

Australian Wool Testing Authority Ltd - trading as AWTA Product Testing
A.B.N 43 006 014 106

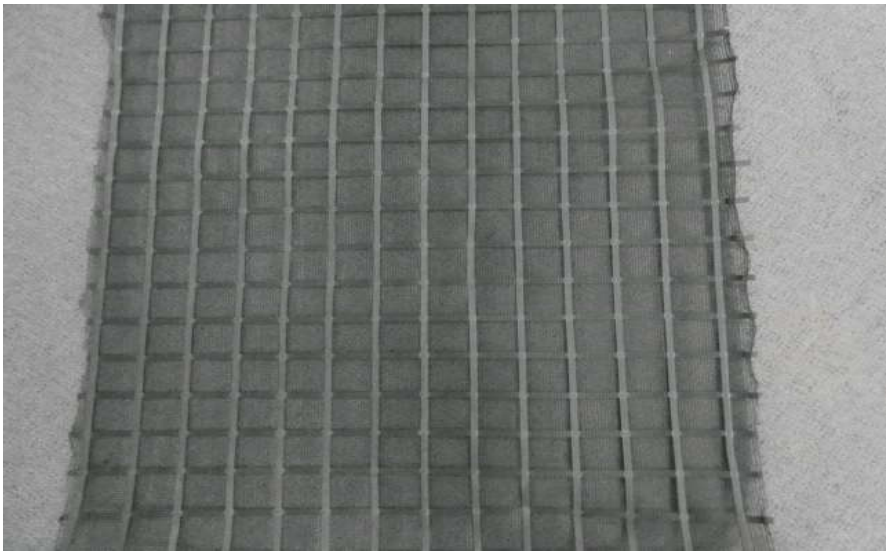
1st Floor, 191 Racecourse Road, Flemington, Victoria 3031
P.O Box 240, North Melbourne, Victoria 3051
Phone (03) 9371 2400

TEST REPORT

Client : AlfaTest
PO Box 229
Salisbury QLD 4107

Test Number : 23-004358
Issue Date : 10/11/2023
Print Date : 13/11/2023
Order Number : 5139

Sample Description
Clients Ref : "Uni-Mesh Fire Retardant Flexible Encapsulation Code 7836A Batch No 5. DOM August 2023"
Reinforced Knitted Mesh
Colour : Black



309055 67447

Accredited for compliance with ISO/IEC 17025 - Testing
Accreditation Numbers: 983, 985, and 1356

Samples and their identifying descriptions have been provided by the client unless otherwise stated. AWTA Ltd makes no warranty, implied or otherwise, as to the source of the tested samples. The above test results relate only to the sample or samples tested. This document shall not be reproduced except in full and shall be rendered void if amended or altered. This document, the names AWTA Product Testing and AWTA Ltd may be used in advertising providing the content and format of the advertisement have been approved by the Managing Director of AWTA Ltd.

0204/11/06

Fiona McDonald
APPROVED SIGNATORY

MICHAEL A. JACKSON B.Sc.(Hons)
MANAGING DIRECTOR

7. Appendices

Appendix C - Uni-Mesh FR2 Material Flammability Index Certificate

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Print Date : 13/11/2023
Order Number : 5139

AS 1530.2-1993 **Methods for Fire Tests on Building Materials, Components and Structures.**
Part 2: Test for Flammability of Materials

Date Tested		10-11-2023	
Flammability Index		1	
	Length	Width	
Spread Factor	0	0	
Heat Factor	1	1	
Maximum height (d)			
Mean	2.4	2.0	
Coefficient of Variation	46.5	30.6	%
Heat (a)			
Mean	1.6	1.7	°C.min
Coefficient of Variation	15.0	28.5	%
Number of Specimens Tested	9	9	
Observation	Visisble smoke,melting		

These test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test, and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.

309055 67447 Page 2 of 2

NATA
Accredited for compliance with ISO/IEC 17025 - Testing
Accreditation Numbers: 983, 985, and 1356

Samples and their identifying descriptions have been provided by the client unless otherwise stated. AWTA Ltd makes no warranty, implied or otherwise, as to the source of the tested samples. The above test results relate only to the sample or samples tested. This document shall not be reproduced except in full and shall be rendered void if amended or altered. This document, the names AWTA Product Testing and AWTA Ltd may be used in advertising providing the content and format of the advertisement have been approved by the Managing Director of AWTA Ltd.

AWTA LIMITED

0204/11/06

Fiona McDonald
APPROVED SIGNATORY

MICHAEL A. JACKSON B.Sc.(Hons)
MANAGING DIRECTOR

7. Appendices

Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

AlfaTest Pty Ltd
A.B.N. 58 096 333 774
PO Box 229, Salisbury QLD 4107
Unit 3/121 Evans Rd, Salisbury, Qld 4107

Phone: (07) 3715 3400
Fax: (07) 3715 3401
Email: info@alfatest.com.au

AlfaTest
"Delivering Results"

MECHANICAL TESTING REPORT

AlfaTest Report No:	20240171M01
Date of Test:	19 March 2024
Location of Test:	Client's Premises, Kedron, QLD 4207
Client Name:	Acrow Formwork & Scaffolding Pty Ltd
Client Address:	280 Bilsen Rd, Geebung, QLD 4034
Client Order No:	320000344
Client Job No:	Not specified
Project Details:	Strength Testing of supplied Uni-mesh/ Fire Retardant
Item Details as supplied:	Blue Uni- mesh FR2, Date of manufacture: 2023.12.15
Test Procedure:	AS 1576.7 :2021
Test Specification:	AS 1576.7: 2021 Appendix B
Acceptance Specification:	AS 1576.7: 2021 Appendix B, Sec B.6
Client's Requirements:	Report Finding
Compliance:	The results of the testing undertaken on the supplied component comply with the requirements of AS 1576.7 Appendix B, Section B.6

Technician/s:	Chris Raes Ellie Rahbar	Approved by:	Fabian Lyons
		Signature:	
		Issue Date:	26/03/2024

7. Appendices

Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

AlfaTest
"Delivering Results"

AlfaTest Report No: 20240171M01 Date of Test: 19 March 2024

Strength Testing

Technical Details

Material Spec: Uni- mesh/ Fire Retardant
Test Equipment
Equipment: Test frame/ Scaffolding Assemblies
Equipment: Steel Pendulum, 30 kg mass of nominal dimension 100mmx100mm

Test Restrictions/ Deviations: Mesh fixed and tightened to the scaffold by nylon zip ties in accordance with the client's fixing method for this application.
The test setup has been configured as per the client's instructions.

Note: Customer supplied information may affect the validity of the test results.
* Asterisk indicates client supplied information.

Test Results

Sample Reference	Impact Force applied	Test height above the nominal point of impact as per AS 1576.7, Fig B.2 (h)	Impact location as per AS 1576.7, Fig B.1	Result / Findings
M01: Blue Uni- mesh FR2, Date of manufacture: 2023.12.15	30 Kg	1000mm	Point 01	No hole or tearing observed at the point of impact of the pendulum. No fixings failure of encapsulation to the test assembly detected.
			Point 02	No hole or tearing observed at the point of impact of the pendulum. No fixings failure of encapsulation to the test assembly detected.
			Point 03	Two 30mm diameter holes were observed at the point of impact of the pendulum, which is within the standard requirement of being less than 50mm. No fixings failure of encapsulation to the test assembly detected.

7. Appendices

Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

AlfaTest "Delivering Results"

AlfaTest Report No: 20240171M01 Date of Test: 19 March 2024

Strength Testing

Photographs

Photograph 1. General view of marking of received component.

Photograph 2. General view of M01- Blue Uni-mesh test set up.

7. Appendices

Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

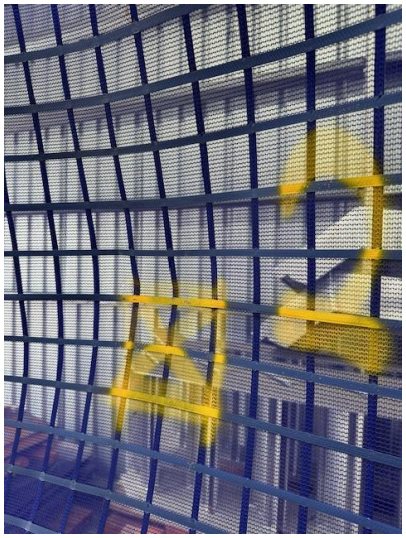
AlfaTest
"Delivering Results"

AlfaTest Report No:	20240171M01	Date of Test:	19 March 2024

Strength Testing

Photographs

Photograph 3. Detail view of M01- Blue Uni-mesh at point 01 after test.



Photograph 4. Detail view of M01- Blue Uni-mesh at point 02 after test.

7. Appendices

Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

AlfaTest
"Delivering Results"

AlfaTest Report No: 20240171M01 Date of Test: 19 March 2024

Strength Testing

Photographs

Photograph 5. Detail view of M01- Blue Uni-mesh at point 03 after test.

7. Appendices

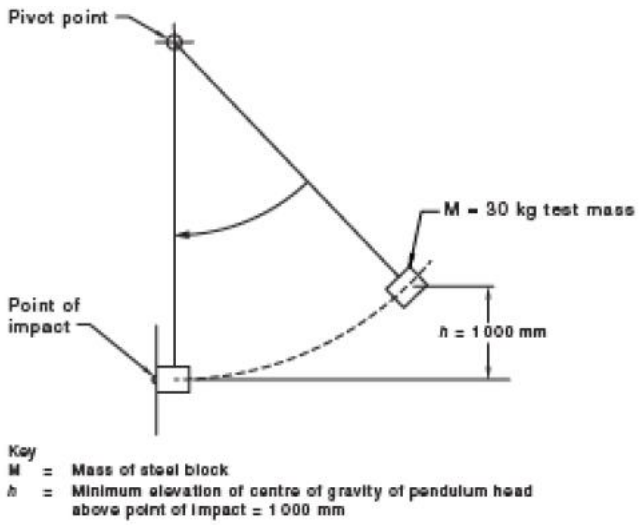
Appendix D - Uni-Mesh FR2 Strength Test LT-HW-0001

AlfaTest
"Delivering Results"

AlfaTest Report No: 20240171M01 Date of Test: 19 March 2024

Strength Testing

Reference



Reference 1. Pendulum test configuration as per AS 1576.7, Figure B.2.

LOCATIONS

NEW SOUTH WALES

National Head Office
Formwork & Scaffold
2a Mavis Street
Revesby NSW 2212
P: 02 9780 6500
F: 02 9780 6499
E: info@acrow.com.au

Screens Head Office
13-15 Vallance Street
St Marys NSW 2760
P: 02 9219 1566

QUEENSLAND

Formwork & Scaffold
280 Bilsen Road
Geebung QLD 4034
P: 07 3265 2266
F: 07 3865 0277

Screens & Formwork
2 Morrison Lane
Beenleigh QLD 4207
P: 07 3807 9800

Industrial Scaffold
22a Spanns Road
Beenleigh QLD 4207
P: 07 3442 4000

TASMANIA

Formwork & Scaffold
93 Lampton Avenue
Moonah TAS 7009
P: 03 6277 1212
F: 03 6277 1290

Formwork & Scaffold
65 Boland Street
Launceston TAS 7250
P: 03 6324 8282
F: 03 6324 8250

WESTERN AUSTRALIA

Formwork & Scaffold
11 Jackson Street
Bassendean WA 6054
P: 08 9373 7200
F: 08 9379 3488

SOUTH AUSTRALIA

Formwork & Scaffold
26 Circuit Drive
Hendon SA 5014
P: 08 8359 9700
F: 08 8359 1366

VICTORIA

Formwork, Scaffold & Screens
159 Wellington Road
Clayton VIC 3168
P: 03 9582 2777
F: 03 9582 2790

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ENGINEERING & CONSTRUCTION

Contact

Phone: 1300 138 362

www.acrow.com.au