







# **TECHNICAL REPORT ON THE COMPRESSIVE** STRENGTH OF PLASTIC/RUBBER **COMPOSITE I-BEAMS**

**Client: Plastic Forests** 

21 Union Road, North Albury NSW 2640

## **ExcelPlas Job # 11853 Compressive Strength**

274-276 Wickham Road, Highett, VIC 3190 P.O. Box 147, Moorabbin, VIC 3189 www.excelplas.com



## 14th February 2022

#### **COMMERCIAL-IN-CONFIDENCE**

#### 1. Objective

The objective of this study is to measure the compressive strength of plastic/rubber Ibeam samples.

#### 2. Samples Supplied

Five plastic/rubber I-beam specimens were supplied by David Hodge of Plastic Forests for measurement of compressive strength.

The identifications of the samples were:

Sample ID: COF R

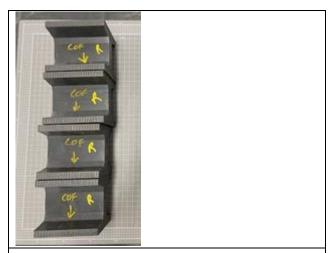


Figure 1. Samples as received by ExcelPlas.

#### 3. Testing Undertaken

The compressive strength testing was undertaken according to the principle from ASTM D 695 with modifications.

#### **4. Testing Methodology**

The compressive strength testing was conducted using a Cometech Universal Testing Machine QC-503A2 S/N 114870 (Asset No. 006) according to the procedure described in ASTM D 695 with modification.

#### 5. Conditioning.

The specimens were conditioned at 23°C for more than 24 hours and 50% relative humidity prior to testing. The testing was done in the same environment.

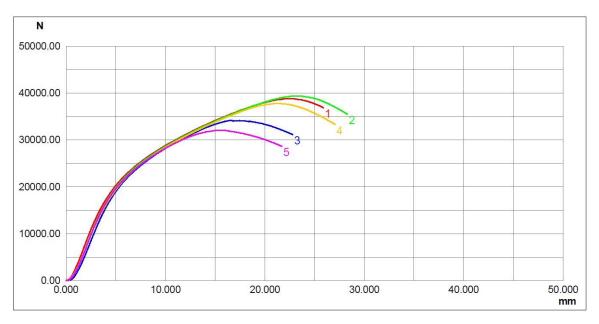


### 6. Results

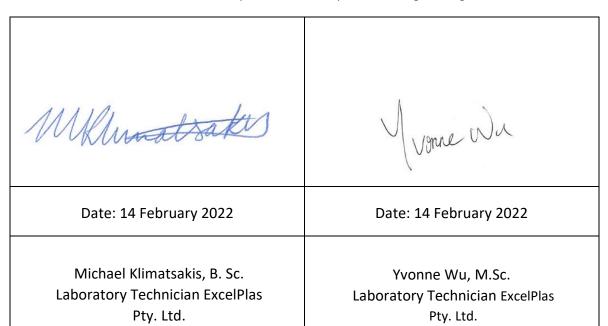
Sample Identification: COF R

Date of Test: 14 February 2022

|                       | The length of  | Sample    | Maximum      | Maximum      |
|-----------------------|----------------|-----------|--------------|--------------|
|                       | the middle     | Thickness | Compressive  | Compressive  |
|                       | structure (mm) | (mm)      | Strength (N) | Stress (MPa) |
| Specimen 1            | 88.98          | 19.93     | 38811        | 21.9         |
| Specimen 2            | 89.90          | 19.96     | 39339        | 22.0         |
| Specimen 3            | 90.08          | 20.01     | 34210        | 19.0         |
| Specimen 4            | 89.37          | 19.95     | 37793        | 21.2         |
| Specimen 5            | 89.44          | 20.21     | 32078        | 17.8         |
| Average               | 89.55          | 20.01     | 36458        | 20.4         |
| Standard<br>Deviation | 0.440          | 0.115     | 3171         | 1.89         |



| Prepared By | Reviewed By |
|-------------|-------------|
|             |             |



ExcelPlas Polymer Technology & Testing,
Postal address: PO Box 147, Moorabbin, VIC 3189
Australia
p. +61 3 9532 2207

#### Terms & Conditions:

The testing herein is based upon accepted industry practice as well as the test methods listed.

Test results reported herein do not apply to samples other than those tested.

ExcelPlas neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

It is up to the client to validate the suitability of any material recommendations contained in this report by conducting proper product field trials to establish 'fitness for purpose' to their satisfaction.

We believe the conclusions and recommendations contained in this report were reasonable and appropriate at the time of issue of the report. However, please note that fundamental input assumptions upon which this report is based may change with time. It is the user's responsibility to ensure that input assumptions remain valid.

ExcelPlas shall not be liable for any losses, costs, damages or expenses incurred by the recipient or any other person or entity resulting from the use of any information or interpretation given in this report. The Client shall indemnify ExcelPlas Pty Ltd, its officers, representatives and employees from and against any claims made by third parties against the Client or ExcelPlas Pty Ltd arising from damage claimed to be suffered by those third parties (including without limitation any third party utilising the Results with the Client's authorisation express or implied) or any other person to whom the Client has made the Results available.





This report is based in part on information which was provided to us by the client and/or others. We do not warrant or guarantee the accuracy of this information.

ExcelPlas observes and maintains client confidentiality.

This report must be read in its entirety. Please note that this includes all reports and appendices carrying this report number as well as any related report numbers. The Terms and Conditions must also be reproduced with every copy.

ExcelPlas limits reproduction of this report, except in full, without prior approval of ExcelPlas.

This report is prepared solely for the use of the person or company to whom it is addressed. No responsibility or liability to any third party is accepted for any damages howsoever arising out of the use of this report by any third party.

Unless otherwise negotiated with the client, test samples will be disposed of 90 days after the report has been issued. In the case of large samples (greater than approximately half metre square), the client needs to arrange for sample pick up or disposal (cost will apply to client).

ExcelPlas Pty Ltd is dedicated to Customer Service and welcomes your feedback. Please email <a href="mailto:lab@excelplas.com">lab@excelplas.com</a> or visit <a href="mailto:feedback.excelplas.com">feedback.excelplas.com</a> to send us your suggestions or comments.

We thank you for your time