ExcelPlas TEST REPORT

TECHNICAL REPORT ON THE DETERMINATION OF THE COEFFICIENT OF FRICTION OF PLASTIC / RUBBER COMPOSITE I-BEAM SAMPLES

Plastic Forest Pty. Ltd.
21 Union Road, North Albury, NSW 2640

ExcelPlas Job # 11794

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7 February 2022

COMMERCIAL-IN-CONFIDENCE

1. Objective

The objective of this study is to determine the coefficient of friction of supplied plastic/rubber composite samples against a supplied chequered steel plate surface.

2. Samples Supplied

5 specimens of plastic/rubber composite I-beams were supplied by David Hodge of Plastic Forest Pty. Ltd. for determination of coefficient of friction.

The identification of the sample:

Sample ID:
Sample R

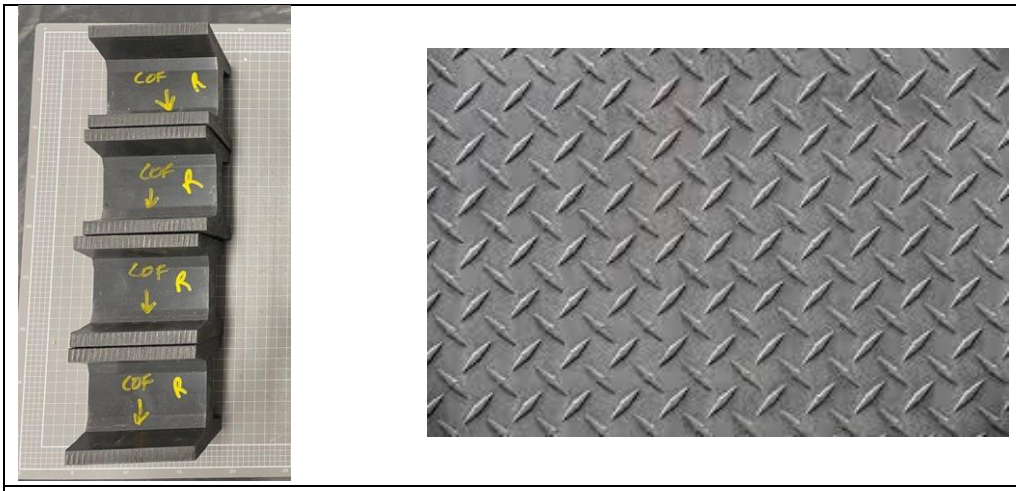


Figure 1. Samples as received by ExcelPlas.

3. Testing Undertaken

The coefficient of friction determination was undertaken according to the principles of ASTM D1894 with modifications.

Specimen conditioned at 23°C, 50% RH for 24 hours prior to testing.

Testing was carried out using a Cometech Universal Testing Machine QC-506A1 S/N 112012 (Asset No. 001).

Testing was carried out at ExcelPlas Highett laboratory.

4. Method of Sampling.

Specimens were provided by the client.

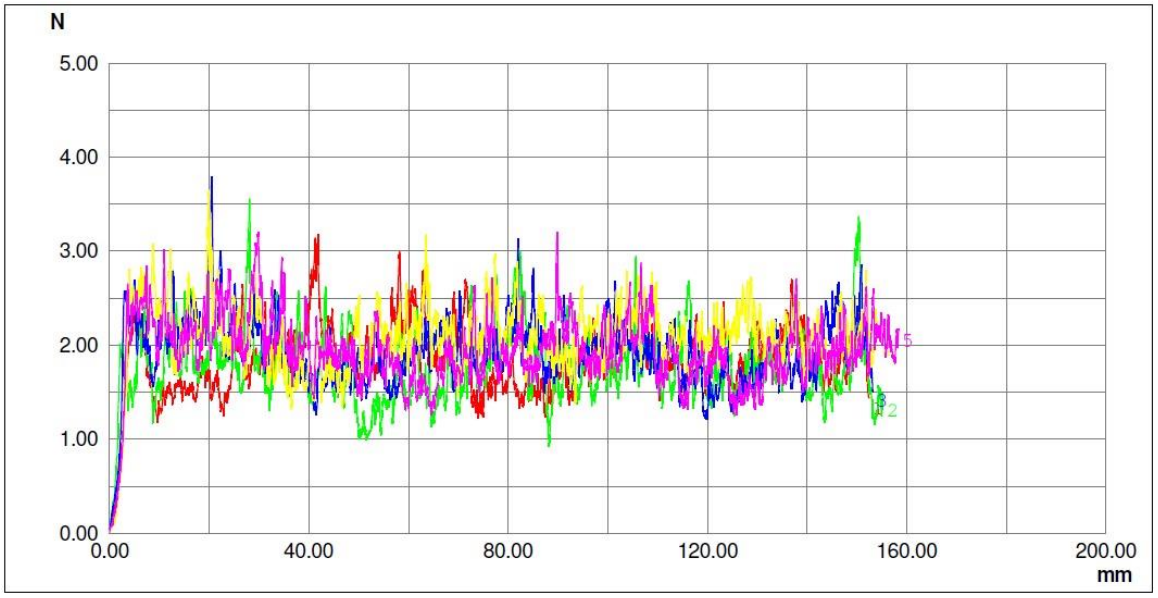
5. Testing Methodology

- Specimens were attached to a thin copper wire to slide the specimen across the dragging surface. The mass of the wire + rubber specimen was taken into account when calculating coefficient of friction.
- To avoid contamination/ introduction of dirt, dust etc., care was taken to not touch or lay down specimens on the sides being tested.
- A variation from the standard test method of the sled and specimen having a total mass of 200g ±5g was necessary, as the combined mass of the wire + rubber specimens did not meet these criteria.
- G-clamps were necessary to clamp the chequered steel plate 'dragging surface' in place.
- Each specimen's 'dragging surface' was tested on the side marked by the client.

6. Results

Coefficient of friction for Sample R:

Sample R	Coefficient of Static Friction ((N/g)/kg)	Coefficient of Kinetic Friction ((N/g)/kg)
Specimen 1	0.646	0.495
Specimen 2	0.548	0.474
Specimen 3	0.715	0.511
Specimen 4	0.744	0.555
Specimen 5	0.705	0.513
Mean Coefficient of Static Friction	**0.672**	**0.510**
Standard Deviation	**0.078**	**0.030**



Prepared By	Reviewed By
	
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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.

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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).

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