

6. Results (Continued)



**TECHNICAL REPORT ON THE
DETERMINATION OF THE COEFFICIENT OF FRICTION
OF BIG BLOCK DUNNAGE**

Plastic Forest Pty. Ltd.

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ExcelPlas Job # 12378

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18 October 2022



6. Results (Continued)

COMMERCIAL-IN-CONFIDENCE

1. Objective

The objective of this study is to determine the coefficient of friction of supplied samples against a supplied chequered steel plate surface for all the samples supplied.

2. Samples Supplied

2 samples of 100% plastic blocks were supplied by David Hodge of Plastic Forest Pty. Ltd. for determination of coefficient of friction.

The identification of the samples were:

Sample ID:	Client ID: 138mm Block
12378-3	Cross Embossed Block
12378-4	Smooth Block



Figure 1. Samples as received by ExcelPlas.

3. Testing Undertaken



6. Results (Continued)

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

Specimens were conditioned at 23°C, 50% RH for >48 hours prior to testing.

Testing was carried out using a Cometest 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

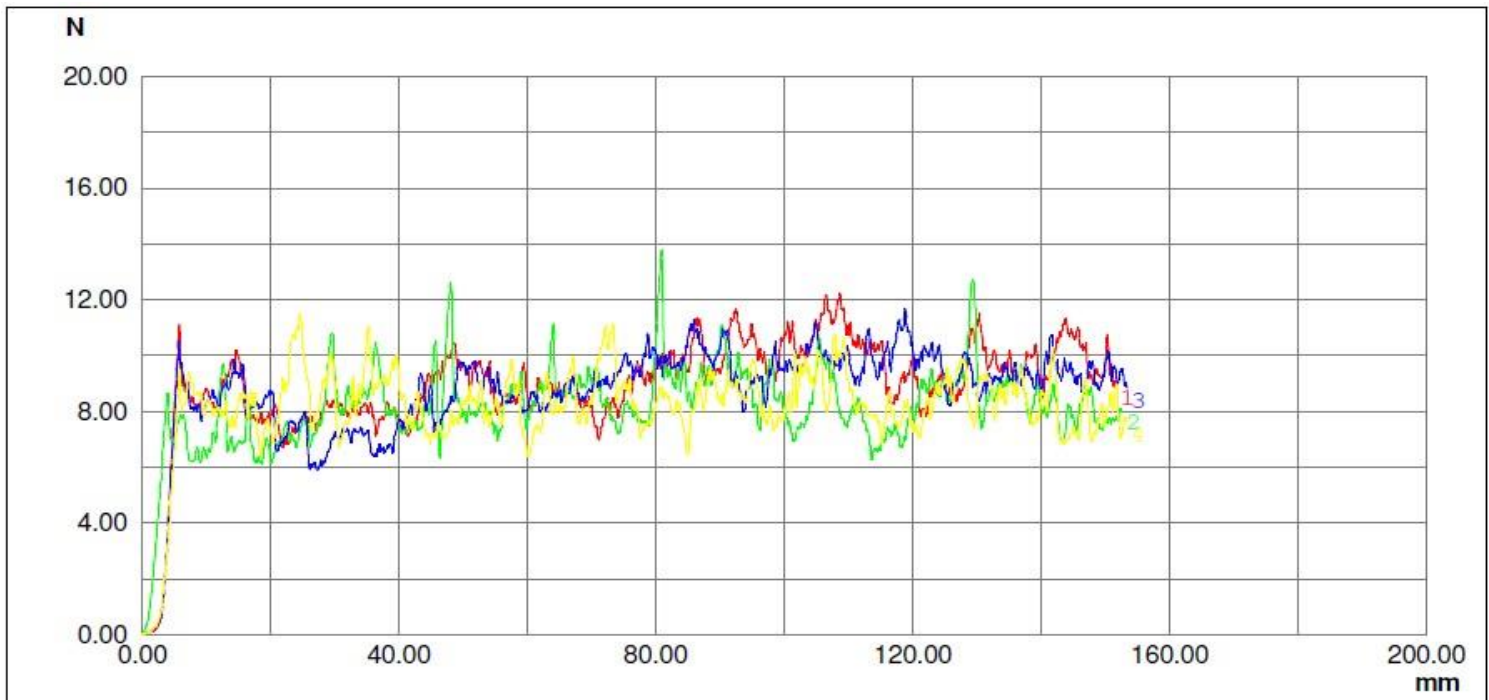
- Specimens were attached to a thin copper wire to slide the specimen across the dragging surface. The mass of the wire + rubber specimen was taken into account when calculating coefficient of friction.
- To avoid contamination/ introduction of dirt, dust etc., care was taken to not touch or lay down 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 (Continued)**6. Results**

Coefficient of friction for Sample 12378-3:

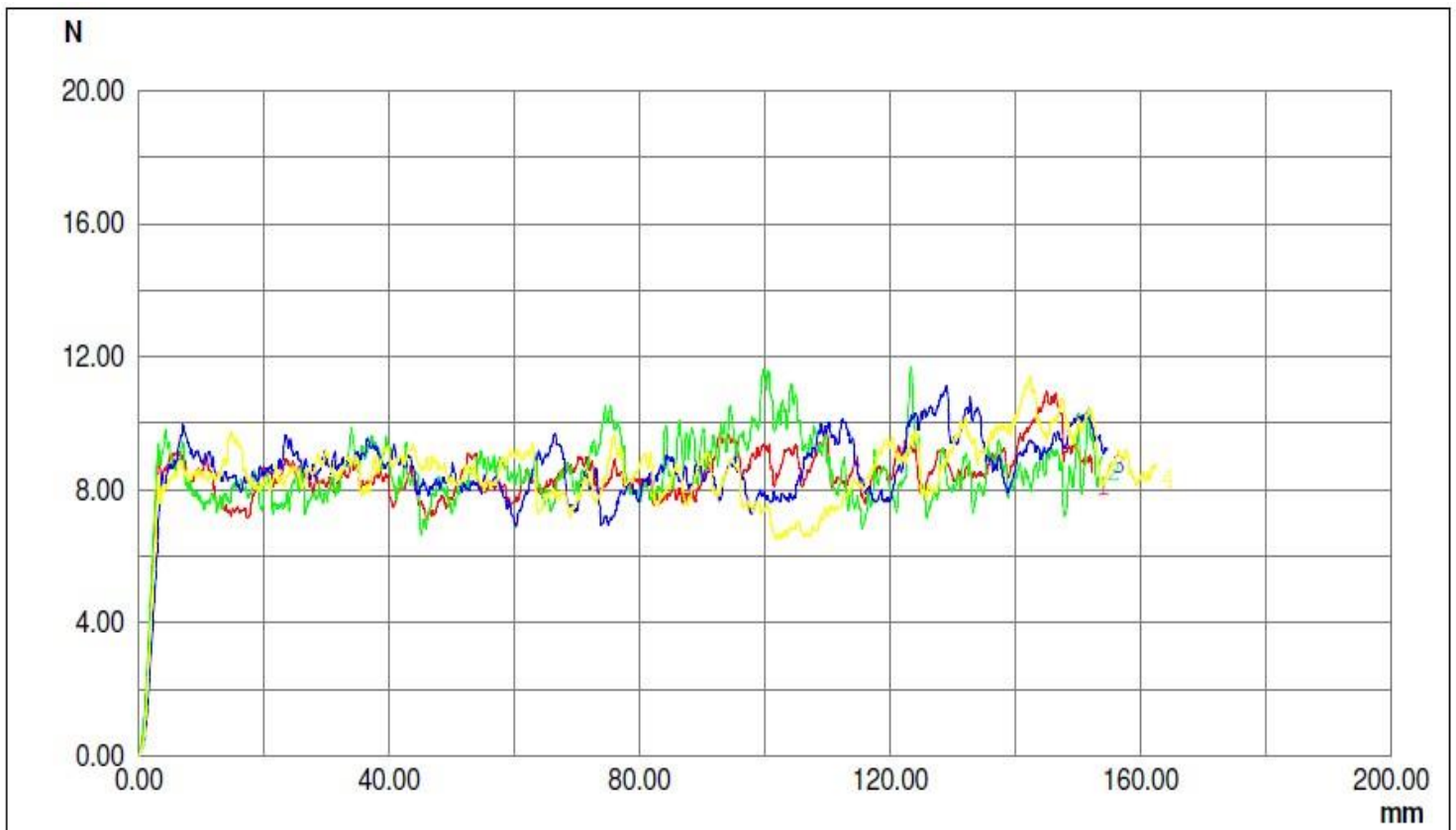
Sample R	Coefficient of Static Friction ((N/g)/kg)	Coefficient of Kinetic Friction ((N/g)/kg)
Specimen 1	0.606	0.500
Specimen 2	0.472	0.460
Specimen 3	0.576	0.488
Specimen 4	0.518	0.462
Mean Coefficient of Static Friction	0.543	0.477
Standard Deviation	0.060	0.020





6. Results (Continued)

Coefficient of friction for Sample 12378-4:

Sample R	Coefficient of Static Friction ((N/g)/kg)	Coefficient of Kinetic Friction ((N/g)/kg)
Specimen 1	0.500	0.458
Specimen 2	0.535	0.470
Specimen 3	0.544	0.470
Specimen 4	0.532	0.460
Mean Coefficient of Static Friction	0.528	0.465
Standard Deviation	0.019	0.006



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