



TECHNICAL REPORT ON THE COEFFICIENT OF THERMAL EXPANSION OF POLIWOOD DECKING SAMPLE

Build Wholesale Group (Pty.) Ltd.

ExcelPlas Job # 7600
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COMMERCIAL-IN-CONFIDENCE



1. Objective

The objective of this study is to measure the coefficient of thermal expansion of poliwood decking sample.

2. Samples Supplied

One sample of Poliwood Decking was supplied by Build Wholesale Group (Pty.) Ltd. for coefficient of thermal expansion.

The identification of the samples was:

Poliwood Decking sample (brown)

3. Testing Undertaken

Coefficient of Thermal Expansion testing was undertaken to ASTM E 831 (modified).

4. Method of Sampling.

The Poliwood Decking sample was tested at area selected at random along the longitudinal direction.

The specimens of CTE were prepared by using a lathe, razor blade and sandpaper.

5. Testing Methodology

The coefficient of thermal expansion testing was conducted according to the methodology stated in ASTM E 831 (modified).

The temperature used for the coefficient of thermal expansion determination was from 5 °C to 45 °C with a midpoint temperature of 25°C

The test temperature range used in the machine was from 0°C to 65°C

The purge gas used was nitrogen

The cooling medium used were air cooling and a cooling apparatus

Thermomechanical analysis apparatus model number was Q 400/1547 TMA manufactured by TA Instruments



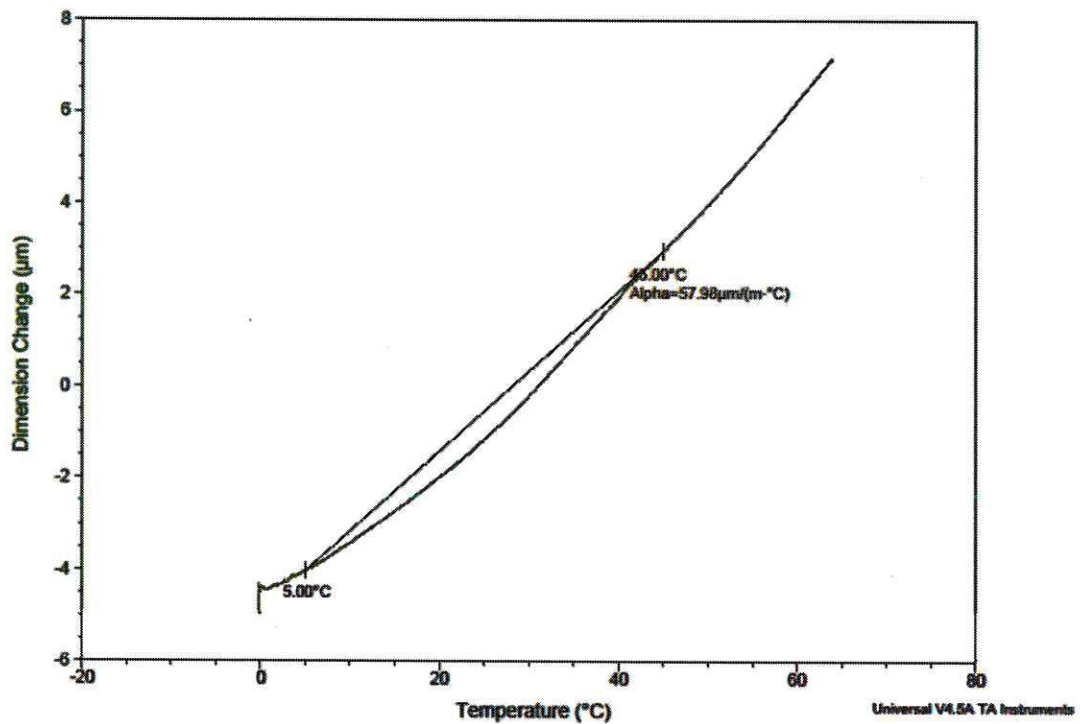
6. Results



Sample	Poliwood Decking sample (brown)
Test Date	27/07/2018
Sample Thickness (mm)	3.0193
Coefficient of Linear Thermal Expansion ($\mu\text{m}/(\text{m}\cdot^{\circ}\text{C})$)	57.98

Sample: 7600 Poliwood Decking
Size: 3.0193 mm
Method: Thermal Expansion (0-65C)

TMA

File: Job # 7600 Poliwood Decking sample (b...
Operator: RH
Run Date: 27-Jul-2018 14:21
Instrument: TMA Q400 V22.5 Build 31



Prepared By	Reviewed By
	
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