

**Lab reference** : LTR 2421

**Title** : Testing of Jogging Track System

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**Background:**

Performance testing was undertaken of the complete jogging track system.

Component	Product	Coat Weight (kg/m <sup>2</sup> )
Primer	PU3922	0.15
Base Layer Rubber	SBR (1-3mm) applied as a 13mm layer	6.25
Base Layer Binder	PU4872 at 20% SBR weight	1.25
Top Layer Rubber	EPDM (1-3mm) applied as a 5mm layer	3.60
Top Layer Binder	PU4872 at 18% EPDM weight	0.65
Pour Sealer	PU4731/1	1.40
Flood Coat	PU4732	1.50

**Lab Testing:*****Tear Strength:***

Two cured films of the PU4732 was prepared and allowed to condition for 7 days, one at 23°C and 50% relative humidity and the other at 60°C, 30% humidity using an environmental chamber. Test samples were then cut with a die cutter (angle test piece with nick) and tested following the method laid out in BS 903: Part A3: 1995, ISO 34-1: 1994 to destruction with an Instron 4411 Tensometer and an average of their results were taken.

***Bond Strength Testing:***

Two cured films of the jogging track system was prepared and allowed to condition for 7 days, one at 23°C and 50% relative humidity and the other at 60°C, 30% humidity using an environmental chamber. Following the method laid out in ASTM D4541-09, aluminium dollies were then attached to the surface of the sample and allowed to cure for 24 hours using an epoxy resin. Three dollies were tested for each sample using an Elcometer and the average tensile value was recorded.

***Taber Abrasion Testing:***

Two cured films of the jogging track system was prepared and allowed to condition for 7 days, one at 23°C and 50% relative humidity and the other at 60°C, 30% humidity using an environmental chamber. The abrasion resistance was tested using a Taber 5135 Rotary Platform Abraser following the method laid out in ASTM D4060-95. The samples were tested for a 1000 revolution cycle using Calibrase CS17 abrasion wheels and 1kg weights. The weight loss after each cycle was recorded.

***QUV Discolouration:***

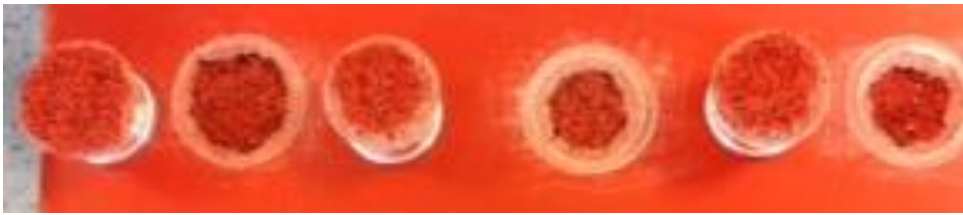
Colour stability was tested using a Q-Panel Accelerated Weathering Tester following ASTM D4587-05. Cured films were tested for 200 hours and the colour variance measured with a Sheen Micromatch.

**Results:*****Tear Strength:***

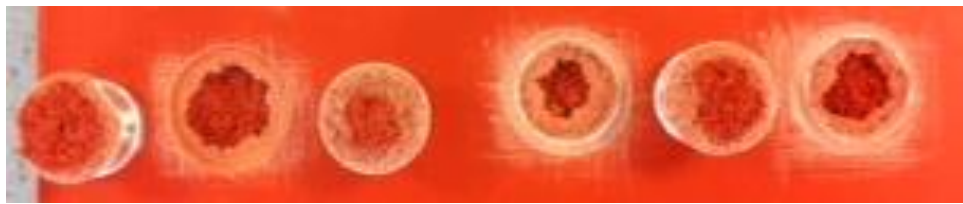
Parameter	PU4732 (conditioned at 23°C, 50% Relative Humidity)	PU4732 (conditioned at 60°C, 30% Relative Humidity)
Tear Strength (kN/m)	9.44	10.85

***Bond Strength Testing:***

Parameter	Jogging Track (conditioned at 23°C, 50% Relative Humidity)	Jogging Track (conditioned at 60°C, 30% Relative Humidity)
Bond Strength (N/mm <sup>2</sup> )	3	2



Dolly pulls from jogging track show bond failure at the rubber.



Dolly pulls from jogging track after it has been on the environmental chamber show bond failure at the rubber.

***Taber Abrasion Testing:***

Parameter	Jogging Track (conditioned at 23°C, 50% Relative Humidity)	Jogging Track (conditioned at 60°C, 30% Relative Humidity)
Weight Lost (g)	0.0559	0.0392



After Taber abrasion testing - jogging track (conditioned at 23°C, 50% Relative Humidity)



After Taber abrasion testing - Jogging Track (conditioned at 60°C, 30% Relative Humidity)

***QUV Discolouration:***

Parameter	Jogging Track
Colour Variance ( $\Delta E$ )	1.41

Generally a colour variance of less than 0.5 is not noticeable to the human eye. The test sample showed minimal colour change after 200 hours exposure.

**Conclusion:**

Lab testing showed that the jogging track system can withstand a wide range of environmental conditions without negatively effecting performance.

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