

Don Wan
Prime Manufacturing Pty. Ltd.
47 Canterbury Road
BRAESIDE VIC. 3195

25th of February, 2014

M.S.T.C. TEST REPORT T14-00098/0001

Company:	Prime Manufacturing Pty. Ltd.
Sample Description:	<i>Prime Impact Bar</i> - black, two component impact bar material
Intended Use:	Slider Impact Bars – used in small quantities only [Refer: MDG3608, Sections 3.6 & 3.3]
Sample No.:	T14-00098/0001



SUMMARY

The material **complied** with the Ignitability and Flame Propagation Characteristics (Finger Burn Test) requirements of MDG3608, Clause 3.3.1.1.

The material **complied** with the Oxygen Index requirements of MDG3608, Clause 3.3.1.2.

The material **complied** with the Electrical Resistivity requirements of MDG3608, Clause 3.3.1.3.

Analysed by:



Checked by:



Authorised by:



G. Slater
Manager
Mine Safety Technology Centre



WORLD RECOGNISED
ACCREDITATION
Accredited for compliance
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Accreditation No. 2325

Endorsed tests indicated by logo on test page

IGNITABILITY & FLAME PROPAGATION CHARACTERISTICS (Finger Burn test)

Sample: Prime Impact Bar - black, two component impact bar material



Test Date: 21st of February, 2014

Results:

Test	Persistence of Flame (s)	Persistence of After Glow (s)	Extent of Charring (mm)
1	1	0	35
2	0	0	30
3	0	6	55
4	0	2	40
5	4	0	30
6	0	2	25
7	1	0	35
8	0	0	35
9	1	0	40
10	3	0	40
Mean	1 s	1 s	37 mm

Notes:

- These test results on their own do not indicate the fire hazard of the material or product under actual fire conditions and consequently should not be applied to the assessment of fire hazard without taking into account supportive information.
- Sample dimensions: 13 mm x 28 mm x 150 mm
- Mean bunsen flame temperature: 980°C
- Tests # 1 - # 5 had the softer component facing the Bunsen flame. Tests # 6 - # 10 had the sample finger positioned so that the harder component faced into the Bunsen flame.

Method of Analysis:

AS 1334.10-1994: Methods of testing conveyor and elevator belting – Method 10: Determination of ignitability and flame propagation characteristics of conveyor belting.

Any variation from Standard/Test Method: Sample sizes as received.

Requirements:

When tested in accordance with AS 1334.10-1994, meets the following requirements:

- the average duration of visible flame shall not exceed 30 s and the average duration of the visible afterglow shall not exceed 120 s.
- the duration of the visible flame of any test piece shall not exceed 45 s and the duration of the visible afterglow of any test piece shall not exceed 180 s.

Sample Status:

The material **complied** with the requirements for Ignitability and Flame Propagation Characteristics (Finger Burn test) of MDG3608, 3.3.1.1.

OXYGEN INDEX

Sample:

Prime Impact Bar - black, two component impact bar material

Test Date:

21st of February, 2014

Results:

	% O ₂
<i>Oxygen Index</i>	30.8

Notes:

- a) Oxygen concentrations are percentage by volume.
- b) Top surface ignition [ISO4589-2:1996 ignition 'Procedure A'].
- c) Sample size: 13 mm x 29 mm x 150 mm.
- d) The result relate only to the behaviour of the test specimens under the conditions of the test and these results shall not be used to infer the fire hazards of the materials in other forms or under other fire conditions.



Method of Analysis:

ISO 4589-2:1996(E) *Determination of Burning Behaviour by Oxygen Index – Part 2 Ambient-temperature test.*

Any variation from Standard/Test Method:

Sample sizes as received.

Requirements:

- i. The calculated oxygen index shall not be less than 28%
- ii. When the material is re-tested at a later stage, the result shall be within ± 3 points of that originally obtained, but in no case shall be less than 28%.

Sample Status:

The material **complied** with the requirements for Oxygen Index of MDG3608, 3.3.1.2.

ELECTRICAL RESISTIVITY

Sample: Prime Impact Bar - black, two component impact bar material

Method of Analysis i): AS 1334.9-1982 (Determination of electrical resistance of conveyor belting).

Test Date: 12th of February, 2014

Results:

Test Piece	Electrical Resistance (MΩ)	
	Surface 1	Surface 2
1	0.25	0.19
2	< 0.1	< 0.1
Mean	< 0.18 MΩ	< 0.15 MΩ

Notes:

- a) Conditioned at ≤23°C and ≤70% relative humidity for > 2 hours in an unrestrained state.
- b) Tested at ambient temperature of 20°C with 60% relative humidity.
- c) Sample sizes: 290 mm x 98 mm.
- d) No conductivity solution applied between electrodes and sample surface.

Any variation from Standard/Test Method: Sample sizes as described; electrode overhung samples.



Requirements:

The mean value for the Electrical Resistance on both upper and lower surfaces of the material shall not be greater than 300 MΩ (300 x 10⁶ ohms).

Method of Analysis ii): ISO 2878:2011 (Rubber, vulcanized or thermoplastic – Antistatic & conductive products – Determination of electrical resistance), Clause 8.2

Test Date: 25th of February, 2014

Results:

Test Piece (28 mm thick)	'Through' Electrical Resistance (MΩ)
1	0.20
2	0.16
Mean	0.18 MΩ

Notes:

- a) Conditioned at (23 ± 2)°C and (50 ± 5)% relative humidity for > 16 hours.
- b) Tested at ambient temperature of 22°C with 55% relative humidity.
- c) Sample sizes: 290 mm x 98 mm x 28 mm thick.
- d) No conductivity solution applied between electrodes and sample surface.
- e) Resistance readings taken (5 ± 1) s after application of voltage between electrodes.

Any variation from Standard/Test Method: None.

Requirements:

Where the normal electrical discharge path is between two surfaces, the average of two resistance measurements shall not exceed 300 MΩ (300 megaohm; 300 x 10⁶ ohms).

Sample Status:

The material **complied** with the requirements for Electrical Resistivity of MDG3608, 3.3.1.3.