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Report Sponsor	Issue Date
Henry Cables Limited 508 Yishan Road, Jinghong Bldg., Suite 6H Shanghai China 200235	17/11/14

Mechanical Impact and Mechanical Cutting Test of an Electrical Wiring System

Objective
 This test report confirms that the construction described below has been tested by Exova Warringtonfire Aus Pty Ltd and has achieved the stated performance when subjected to the nominated testing regime.

Test Reference	Test Dates
EWFA 31743700	15/10/14 & 17/10/14

Test Method	Supplementary Standards	Variation from Test Method
AS/NZS 3013:2005, Appendix D & E.	Nil	Nil

Product Description Cable 1
(All dimensions have been measured)
Description: Flexible fire rated 3 × 2.5mm² Core + 2.5mm² Earth Cable
Product Code: FRM3CE2.5
Cores:
Conductor: 2.5mm² core, comprising 50/0.25 mm diameter plain annealed copper wires.
Overall Conductor Diameter: 2.0 mm in diameter
Insulation: X-HF-110 coloured with white, blue, green/yellow and red with a wall thickness of 0.8mm.
Mica tape: 3-off layers of mica tape wound in anti-clockwise direction. The tapes were 18mm wide × 0.14mm thick with 7mm overlap.
Sheath: HFS-110-TP coloured red with a nominal wall thickness of 1.8mm.
Cable Overall Outer Diameter: Nominal 15.7mm.

TESTING AUTHORITY	Exova Warringtonfire Aus Pty Ltd	
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Test Results

Table 1 Summary of Mechanical Impact Test Results

Cable 1			
Specimen Temperature (°C)	Mass (kg)	Drop Height (mm)	Second Characteristic Numeral
-25	11.1	138	2
23	11.1	138	2
110	11.1	138	2

Table 2 Summary of Mechanical Cutting Test Results

Cable 1		
Specimen Temperature (°C)	Cutting Load* (kN)	Second Characteristic Numeral
-25	9.43	5
23	9.31	5
110	5.87	5

* Minimum cutting load failure of four cutting tests at the nominated temperature. Cutting test performed at Melbourne Testing Services by a representative of Exova.

Wiring System Classification

Based on the test results shown in Table 1 and Table 2 above, a Second Characteristic Numeral Classification, for the protection against mechanical damage in accordance with AS/NZS 3013:2005, Table 3.2, for the Flexible fire rated 3 × 2.5mm² Core + 2.5mm² Earth Cable, over an operating temperature range of -25°C to +110°C, can be assigned as 2.

AS3013-2005 Second Characteristic Numeral Classification: 2

Conditions/Validity

- This report may only be reproduced in full without modifications. Extracts or abridgements of reports shall not be published without permission of Exova Warringtonfire Aus Pty Ltd.
- This test report is based on the results of mechanical impact and cutting testing, as referenced above, performed by Exova Warringtonfire Aus Pty Ltd.
- This test report does not provide an endorsement by Exova Warringtonfire Aus Pty Ltd of the performance of the actual products supplied.
- The conclusions in this test report relate to the configurations as detailed, and should not be applied to any other configuration or other cable construction or type.
- The results of these tests may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.