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Report Sponsor	Issue Date
Henry Cables Limited 508 Yishan Road, Jinghong Bldg., Suite 6H Shanghai China 200235	02/04/14

**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 achieved the stated performance when subjected to the nominated testing regime.

Test Reference	Test Dates
EWFA 28061400	10/02/14 & 12/02/14

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 × 1.5mm<sup>2</sup> Core + 1.5mm<sup>2</sup> Earth Cable  
**Product Code:** FRM3CE1.5  
**Cores:**  
**Conductor:** 1.5mm<sup>2</sup> core, comprising 30/0.25 mm diameter plain annealed copper wires.  
**Overall Conductor Diameter:** 1.5mm in diameter  
**Mica Tape:** 3-off layers of glass tape wounded at the same direction. The tape was 0.14mm thick × 7mm wide.  
**Insulation:** X-HF-110 coloured white, blue and red with a nominal wall thickness of 0.75mm.  
**Earth:**  
**Conductor:** 1.5mm<sup>2</sup> core, comprising 30/0.25 mm diameter plain annealed copper wires.  
**Overall Conductor Diameter:** 1.5mm in diameter  
**Mica Tape:** 3-off layers of glass tape wounded at the same direction. The tape was 0.14mm thick × 7mm wide.  
**Insulation:** X-HF-110 coloured green with yellow stripe with a nominal wall thickness of 0.75mm.  
**Sheath:** HFS-110-TP coloured red with a nominal wall thickness of 2.0mm.  
**Cable Overall Outer Diameter:** Nominal 16mm.

<b>TESTING AUTHORITY</b>	Exova Warringtonfire Aus Pty Ltd	
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## Test Results

**Table 1 Summary of Mechanical Impact Test Results**

Cable 2			
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	-

**Table 2 Summary of Mechanical Cutting Test Results**

Cable 2		
Specimen Temperature (°C)	Cutting Load* (kN)	Second Characteristic Numeral
-25	6.78	5
23	7.45	5
110	5.83	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 × 1.5mm<sup>2</sup> Core + 1.5mm<sup>2</sup> Earth Cable, over an operating temperature range of -25°C to +110°C, cannot be assigned.

**AS3013-2005 Second Characteristic Numeral Classification : X**

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- 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.