

Test Report

No. 2098819/EC

Date : Jul 21 2009

Page 1 of 5

ARMOUR HONG KONG LTD.
UNIT 2003, VALLEY CENTRE,
80-82 MORRISON HILL ROAD,
WAN CHAI, HONG KONG

The following sample was submitted and identified on behalf of the client as:
LSOH CABLE

SGS Job No. : 1272975
Sample Receiving Date : JUL 07 2009
Testing Period : JUL 07 - 21 2009

Test Required:

1. This test was performed in accordance with IEC 60332-1: 2004. Test for vertical flame propagation for a single insulated wire or cable.
2. This test is conducted as per IEC 61034-1:2005 Measurement of smoke density of cables burning under defined conditions –Part 1: Test apparatus and IEC 61034-2:2005 Measurement of smoke density of cables burning under defined conditions –Part 2: Test procedure and requirements.
3. This test is conducted as per IEC 60754-1:1994 Test on gases evolved during combustion of materials from cable – Part 1: Determination of the amount of halogen acid gas.

Remark : The test was conducted in SGS Affiliate.

Test Results: --- See attached sheet ---

Test Duration:

Sample Receiving Date : JUL.13, 2009
Test Performing Date : JUL.13, 2009 TO JUL.21, 2009

Signed for and on behalf of
SGS Hong Kong Ltd



Hui Ying Ngai, Alex
Section Manager

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1. IEC 60332-1: 2004

I. Test requirements

This test was performed in accordance with IEC 60332-1: 2004. Test for vertical flame propagation for a single insulated wire or cable.

II. Sample details

Color	Pink
Inter Wire Diameter	2.5mm, 4cores
Overall Diameter	7mm

Conditioning: before testing, all test pieces shall be conditioned at (23±5) °C for not less than 16h at a relative humidity of (50±20) %.

III. Test results

Flame Application:60±2s

During the test duration, it shall be recorded:	
If the filter paper has ignited or not;	NO
If the filter paper has ignited, the time from ignition of the filter paper to cessation of the burning;	--
If the distance between the lower edge of the top support and the onset of charring is less than 50mm or not;	NO
If charring extends downwards to a point greater than 540 mm from the lower edge of the top support.	NO

Recommended performance requirements:

The test specimen is recommended considered to have failed the IEC 60332-1: 2004, Test for vertical flame propagation for a single insulated wire or cable, if a vertical specimen show:

- a) The filter paper has ignited.
 - b) The distance between the lower edge of the top support and the onset of charring is less than 50mm.or
 - c) Charring extends downwards to a point greater than 540 mm from the lower edge of the top support
- If a failure is recorded, two more tests shall be carried out, If both tests result in passes, the single insulated conductor of cable shall be deemed to have passed the test.

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2. IEC 61034-1: 2005

I. Test reference

This test is conducted as per IEC 61034-1:2005 Measurement of smoke density of cables burning under defined conditions –Part 1: Test apparatus and IEC 61034-2:2005 Measurement of smoke density of cables burning under defined conditions –Part 2: Test procedure and requirements.

II. Sample details:

Materials / Color / Diameter	Cable / Pink / 7mm
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	Temperature (°C)	Humidity (%)	Duration(h)
Precondition	23±2	50±5	At least16

III. Preparation of specimen

<p>Length of specimen pieces: (1.00±0.05)m Number of specimen: N₁= 6 pieces</p>

<p>Details of mounting test sample: individual test piece was bound together at the ends, and at 300mm from each end, at which place they shall be clamped to the support by means of wire binders.</p>
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Test results

The minimum light transmittance (%)	89
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Recommended performance requirement :

In the absence of any given requirement, it is recommended that a value of 60 % cable light transmittance is adopted as a minimum for any cable tested against this standard.

Remark: Evaluation of test results

- 1) For cables up to and including 80 mm overall diameter, the recorded minimum light transmittance shall be taken as the cable light transmittance.
- 2) For cables above 80 mm overall diameter, the recorded minimum light transmittance shall be normalized by multiplying by a factor of $D/80$ (where D is the actual diameter in millimeters of the cable under test) and the resulting value shall be taken as the cable light transmittance.

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3. IEC 60754-1: 1994

I. Test reference

This test is conducted as per IEC 60754-1:1994 Test on gases evolved during combustion of materials from cable – Part 1: Determination of the amount of halogen acid gas.

II. Sample details:

Materials / Color	Cable / Pink
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	Temperature (°C)	Humidity (%)	Duration (h)
Precondition	23±2	50±5	16

III. Test results

Test No.	Specimen mass(g)	B(ml)	A(ml)	The amount of halogen acid *(mg/g)	Average (mg/g)
1	0.9922	39	32	128.7	128.9
2	0.9900	38	31	129.0	

Remark:

The calculation format:

$$\text{The amount of halogen acid (mg/g)} = \frac{36.5(B - A)M \times (1000/200)}{m},$$

A – the volume of 0,1 M ammonium thiocyanate solution used in the determination.

B – the volume of 0,1 M ammonium thiocyanate solution used in the blank test.

M – the molarity of ammonium thiocyanate solution.

m – the mass of the sample taken in grams.

* – expressed as milligrams of hydrochloric acid per gram of sample.

Statement: The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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Sample photo :



SGS authenticate the photo on original report only

End of Report

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