



2294



**Interscience Fire Laboratory**  
Building 63  
Haslar Marine Technology Park  
Haslar Road, Gosport  
Hampshire PO12 2AG  
United Kingdom  
Tel. : +44 (0) 20 8692 5050  
Fax.: +44 (0) 20 8692 5155  
Email: [firetesting@intersciencecomms.co.uk](mailto:firetesting@intersciencecomms.co.uk)

**Test Report No: ICL/H17/7654**

**EN 60332-1-2: 2004**

**Tests on electric and optical fibre cables under fire conditions-  
Part 1-2 Test for vertical flame propagation for single insulated wire or cable-  
Procedure for 1kW pre-mixed flame.**

**Sponsored By**

Shenzhen Biadi Technology Co.,Ltd  
No.8 Lanzhu East Road, Pingshan district  
Shenzhen  
China

**Test Report No: ICL/H17/7654**

**EN 60332-1-2: 2004**

**Tests on electric and optical fibre cables under fire conditions-  
Part 1-2 Test for vertical flame propagation for single insulated wire or cable-  
Procedure for 1kW pre-mixed flame.**

**Sponsored By**

Shenzhen Biadi Technology Co.,Ltd  
No.8 Lanzhu East Road, Pingshan district  
Shenzhen  
China

**1. Purpose Of Test**

To determine the performance of a specimen of a cable when it is subjected to the conditions of test specified in EN 60332-1-2 Tests on electric and optical fibre cables under fire conditions- Part 1-2 Test for vertical flame propagation for single insulated wire or cable- Procedure for 1kW pre-mixed flame and assess the results against the performance requirements given in EN 13501-6 for classification Eca only.

**2. Scope Of Test**

EN 60332-1-2: 2004 details a method of test for the assessment of the flame propagation characteristics of a single wire or cable. The specimen is deemed to have met the performance requirements of the Standard, if after burning has ceased, the charred or affected portion does not reach within 50mm of the lower edge of the top clamp. In addition, a failure is recorded if charring extends down words to a point greater than 540mm from the lower edge of the top support.

**3. Description Of Test Specimen**

The description of the specimen given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

The product was a 4 pair cable referenced "CAT5E-LSZH" having an overall diameter of 5.3mm and consisting of solid copper conductors, HDPE insulation, Nylon Rip cord and LSZH Violet outer sheath.

The outer sheath of the cable was marked "24AWG 4PR U/UTP CAT5E LSZH"

The sponsor of the test has supplied a Technical data sheet relating to the cable that was tested and this is given in Annex 1.

The sponsor of the test has stated that the cable is sample from the production run.

#### **4 Conditioning Of Specimen**

The specimen was received on 21<sup>st</sup> June 2017.

Prior to the test the specimen was conditioned at a temperature of  $25 \pm 5^{\circ}\text{C}$  for a minimum period of 16 hours.

#### **5 Date Of Test**

The test was performed on 10<sup>th</sup> July 2017.

#### **6 Test Procedure**

The test was performed in accordance with the procedure specified in EN 60332-1-2 and this report should be read in conjunction with that Standard.

The burner was applied for 60 seconds.

#### **7 Test Results**

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

The test results relate only to the specimen of the cable in the form in which they were tested. Small differences in the composition or thickness of the cable may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any cable which is supplied or used is fully represented by the specimen which were tested. Uncertainty measurement has not been taken into account when presenting the test results.

Distance between the lower edge of the top support and the onset of charring (mm): 360

Burning extends downwards from the lower edge of the top support (mm): 470

Burning extends downwards from the lower edge of the top support (mm): 110

#### **8 Recommended performance requirement (Annex A : Informative)**

The insulated conductor or cable shall pass the test if the distance between the lower edge of the top support and the onset of charring is greater than 50mm.

In addition, a failure shall be recorded if the burning extends downwards to a point greater than 540mm from the lower edge of the top support.

**8a. Requirements given in EN 13501-6**

The following requirements are given in clause 9.3 for Class Eca

Under conditions of surface flame attack, and with an exposure time in accordance with EN 60332-1-2:2004, Table 1, there shall be no flame spread (*H*) in excess of 425 mm before the test flame extinguishes.

**9 Conclusion**

The specimen of CAT 5E-LSZH cable meets the performance requirement given in Annex A of EN 60332-1-2: 2004 and as the flame spread is <425mm it satisfies the requirements for Classification Eca.

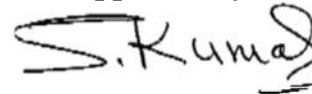
This document does not represent type approval or certification of the product.

**Prepared by**



**C. B. Chong**  
**Fire Scientist**

**Approved by**



**S. Kumar**  
**Technical Manager**

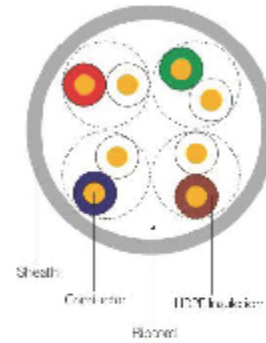
**Date of Issue: 14<sup>th</sup> July 2017**

## Annex 1

<b>Product Specification</b>		<b>Biadi</b> Shenzhen Biadi Technology Co.,Ltd	
PART NO.	CAT5E-LSZH	ISSUE NO.	A1
DATE OF ISSUE	23rd Nov 2016	PAGE	1 of 1

### 24AWG 4Pair CAT5E U/UTP Low Smoke Zero Halogen Cable

Construction		
Inner Conductor	Material	Solid Copper
	Diameter, mm	24AWG 0.49±0.01
Insulation	Material	HDPE
	Diameter	0.92±0.02
	Color	Blue & White/Blue Orange & White/Orange Green & White/Green Brown & White/Brown
Rip-Cord	Material	Nylon Rip-Cord
	Color	White
Sheath	Material	LSZH
	Color	Violet
	Other Color	Accept Customized
	Diameter, mm	5.2±0.3
	Sheath Print	24AWG 4PR U/UTP CAT5E LSNH Accept Customized
Packing	Packing length: 100m, 305m, 500m	
	Packing by: Box / Reel	



Specifications on this sheet are subjected to change without prior notice  
 Phone: 0086-755-89925302      Fax: 0086-755-89929806  
<http://www.biadicable.com>      [sales01@biadicable.com](mailto:sales01@biadicable.com)