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TEST REPORT

No.: CZFTS25000303R01-1_EN

Date: Jul 09,2025

Page 1 of 7

Shanghai Jingsheng Communication Technology Co., LTD

Building 3,2nd floor, No.428, Zhongxin Road, Xiaokunshan Town, Songjiang District, Shanghai, China

Sample Description : 4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH
Project Nr. : 635044/01
Sample Nr. : 20470

The above sample(s) data and information was / were submitted and identified on behalf of the client. SGS is not responsible for the authenticity, integrity and results of the data and information and / or the validity of the conclusion arising therefrom. Results apply to the sample as received.

SGS Ref. No. : WHPL2506000573
Sample Receiving Date : Jun 18,2025
Testing Period : Jun 18,2025 to Jun 26,2025
Test Required : EN 50575:2014+A1:2016 Power, control, and communication cables - Cables for general applications in construction works subject to reaction to fire requirements. Clause 4.1 Reaction to fire.
 Classification according to EN 13501-6:2018+A1:2022 Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables.

Test result(s) : See attached sheet

Signed for and on behalf of
 SGS-CSTC Standards Technical Services (Changzhou) Co., Ltd.

Matthew

Matthew Fang
 Approved signatory



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Test Requested:

EN 50575:2014+A1:2016 Power, control, and communication cables - Cables for general applications in construction works subject to reaction to fire requirements. Clause 4.1 Reaction to fire.

Classification according to EN 13501-6:2018+A1:2022 Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on power, control and communication cables.

1. Introduction

This classification report defines the classification assigned to 4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH in accordance with the procedures given in EN 13501-6.

2. Details of classified product

2.1 General

The product, 4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH, is defined as Optical fibre cable.

2.2 Product description

The product, 4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH, is described below or is described in the reports provided in support of classification listed in 3.1.

Description*	4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH
Model*	SM G657A2
Designation type*	SM G657A2
Generic construction*	250um fiber / LSZH / Aramid yarn / LSZH
Number of cores*	4
Color of sheath	White
Overall diameter	2.2mm
Manufacturer*	Shanghai Jingsheng Communication Technology Co., LTD
Address of Manufacture*	Building 3,2nd floor, No.428, Zhongxin Road, Xiaokunshan Town, Songjiang District, Shanghai, China

*: Provided by the applicant.



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3. Test report and results in support of classification

3.1 Test report

Name of Test Lab.	Name of sponsor	Test report No.	Test method and date
SGS-CSTC Standards Technical Services (Changzhou) Co., Ltd.	Shanghai Jingsheng Communication Technology Co., LTD	CZFTS25000303R02	Jun. 25, 2025 EN 50399:2022
SGS-CSTC Standards Technical Services (Changzhou) Co., Ltd.	Shanghai Jingsheng Communication Technology Co., LTD	CZFTS25000303R03	Jun. 25, 2025 EN 60332-1-2:2004+A12:2020
SGS-CSTC Standards Technical Services (Changzhou) Co., Ltd.	Shanghai Jingsheng Communication Technology Co., LTD	CZFTS25000303R05	Jun. 25, 2025 EN 61034-2:2005+A2:2020
SGS-CSTC Standards Technical Services (Changzhou) Co., Ltd.	Shanghai Jingsheng Communication Technology Co., LTD	CZFTS25000303R04	Jun. 26, 2025 EN 60754-2:2014+A1:2020

3.2 Results

Test method	Parameter	No. Tests	Results	
			Mean value	Compliance with parameters
EN 50399:2022 (20,5kW flame source)	FS(m)	1	0.97	Compliant
	THR ₁₂₀₀ (MJ)		6.8	Compliant
	Peak HRR(kW)		15.7	Compliant
	Peak SPR(m ² /s)		0.04	Compliant
	FIGRA(W/s)		40.7	Compliant
	Flaming droplets / particles		No	Compliant d0
	TSP _{1200s} (m ²)		14.6	Compliant
EN 60332-1-2: 2004+A12:2020	H(mm)	1	105	Compliant
EN 61034-2: 2005+A2:2020	Transmittance (%)	1	94.8	Compliant
EN 60754-2: 2014+A1:2020	c' (µS/mm)	3	0.8	Compliant
	pH'		6.5	Compliant



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Note:

Peak HRR----Maximum value of heat release [kW];

Peak SPR---- Maximum value of smoke production [m²/s];

*THR*_{1200s} ---- Total heat release [MJ];

*TSP*_{1200s} ----Total smoke production [m²];

FIGRA----Fire growth rate index [W/s];

FS----flame spread [m] equals the damaged length of the sample [m];

H----vertical flame spread, distance from the upper onset of charring (above the flame application point) to the lower onset of charring [mm];

c----conductivity (μS/mm), *c'*----the weighted value of conductivity (μS/mm);

pH----acidity, *pH'* ----the weighted value of acidity.

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with EN 13501-6:2018+A1:2022.

4.2 Classification

The product, 4-fibers SMG657A2 Double-sheathed Micro Distribution Cable LSZH, in relation to its reaction to fire behaviour is classified:

B_{2ca}

The additional classification in relation to smoke production is:

s_{1a}

The additional classification in relation to flaming droplets / particles is:

d₀

The additional classification in relation to acidity is:

a₁

The format of the reaction to fire classification for electric cables is:

Fire behaviour		Smoke production			Flaming droplets			Acidity	
B_{2ca}	-	s	1a	,	d	0	,	a	1

i.e. B_{2ca}- s_{1a}, d₀, a₁

Remark: The classes with their corresponding fire performance are given in annex A.



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4.3 Field of application

This classification is valid for the following product parameters as determined in the extended application process according EN 50576:

No application of EN 50576, the report is only valid for the cable type described in section 2.2.

The classification is valid for all end use applications.

5. Limitations

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

The test laboratory has, therefore, play no part in sampling the product for the test, although it holds appropriate references to the manufacturer's factory production control that is aimed to be relevant to the samples tested and that will provide for their traceability.

STATEMENT:

This declaration of conformity is only based on the result of this laboratory activity, the impact of the uncertainty of the results was not included.

The test results or test reports shall not be used for improper or illegal publicity.

Test Address: No.3, Hehai East Road, Tianning District, Changzhou, Jiangsu, China



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Annex A: Classes of reaction to fire performance for electric cables

Class	Test method(s)	Classification criteria	Additional classification
A _{ca}	EN ISO 1716	$PCS \leq 2,0 \text{ MJ/kg}^{(1)}$	
B _{1ca}	EN 50399 (30 kW flame source) and	$FS \leq 1,75 \text{ m and THR1200s} \leq 10 \text{ MJ and Peak HRR} \leq 20 \text{ kW and FIGRA} \leq 120 \text{ Ws}^{-1}$	Smoke production ^(2,5) and Flaming droplets/particles ⁽³⁾ and Acidity ⁽⁴⁾
	EN 60332-1-2	$H \leq 425 \text{ mm}$	
B _{2ca}	EN 50399 (20,5 kW flame source) and	$FS \leq 1,5 \text{ m; and THR1200s} \leq 15 \text{ MJ; and Peak HRR} \leq 30 \text{ kW; and FIGRA} \leq 150 \text{ Ws}^{-1}$	Smoke production ^(2,6) and Flaming droplets/particles ⁽³⁾ and Acidity ⁽⁴⁾
	EN 60332-1-2	$H \leq 425 \text{ mm}$	
C _{ca}	EN 50399 (20,5 kW flame source) and	$FS \leq 2,0 \text{ m; and THR1200s} \leq 30 \text{ MJ; and Peak HRR} \leq 60 \text{ kW; and FIGRA} \leq 300 \text{ Ws}^{-1}$	Smoke production ^(2,6) and Flaming droplets/particles ⁽³⁾ and Acidity ⁽⁴⁾
	EN 60332-1-2	$H \leq 425 \text{ mm}$	
D _{ca}	EN 50399 (20,5 kW flame source) and	$THR1200s \leq 70 \text{ MJ; and Peak HRR} \leq 400 \text{ kW; and FIGRA} \leq 1\ 300 \text{ Ws}^{-1}$	Smoke production ^(2,6) and Flaming droplets/particles ⁽³⁾ and Acidity ⁽⁴⁾
	EN 60332-1-2	$H \leq 425 \text{ mm}$	
E _{ca}	EN 60332-1-2	$H \leq 425 \text{ mm}$	
F _{ca}	EN 60332-1-2	$H > 425 \text{ mm}$	

(1) For the product as a whole, excluding metallic materials, and for any external component (i.e. sheath) of the product.

(2) $s1 = TSP_{1200s} \leq 50 \text{ m}^2 \text{ and Peak SPR} \leq 0,25 \text{ m}^2/\text{s}$

s1a = **s1** and transmittance in accordance with EN 61034-2 $\geq 80 \%$

s1b = **s1** and transmittance in accordance with EN 61034-2 $\geq 60 \%$ < 80 %

$s2 = TSP_{1200s} \leq 400 \text{ m}^2 \text{ and Peak SPR} \leq 1,5 \text{ m}^2/\text{s}$

s3 = not **s1** or **s2**

(3) **d0** = No flaming droplets/particles within 1200 s; **d1** = No flaming droplets/ particles persisting longer than 10 s within 1200 s; **d2** = not **d0** or **d1**.

(4) EN 60754-2: **a1** = conductivity < 2,5 $\mu\text{S}/\text{mm}$ and $\text{pH} > 4,3$; **a2** = conductivity < 10 $\mu\text{S}/\text{mm}$ and $\text{pH} > 4,3$;

a3 = not **a1** or **a2**. No declaration = No Performance Determined.

(5) The smoke class declared for class B_{1ca} cables shall originate from the test according to EN 50399 (30 kW flame source)

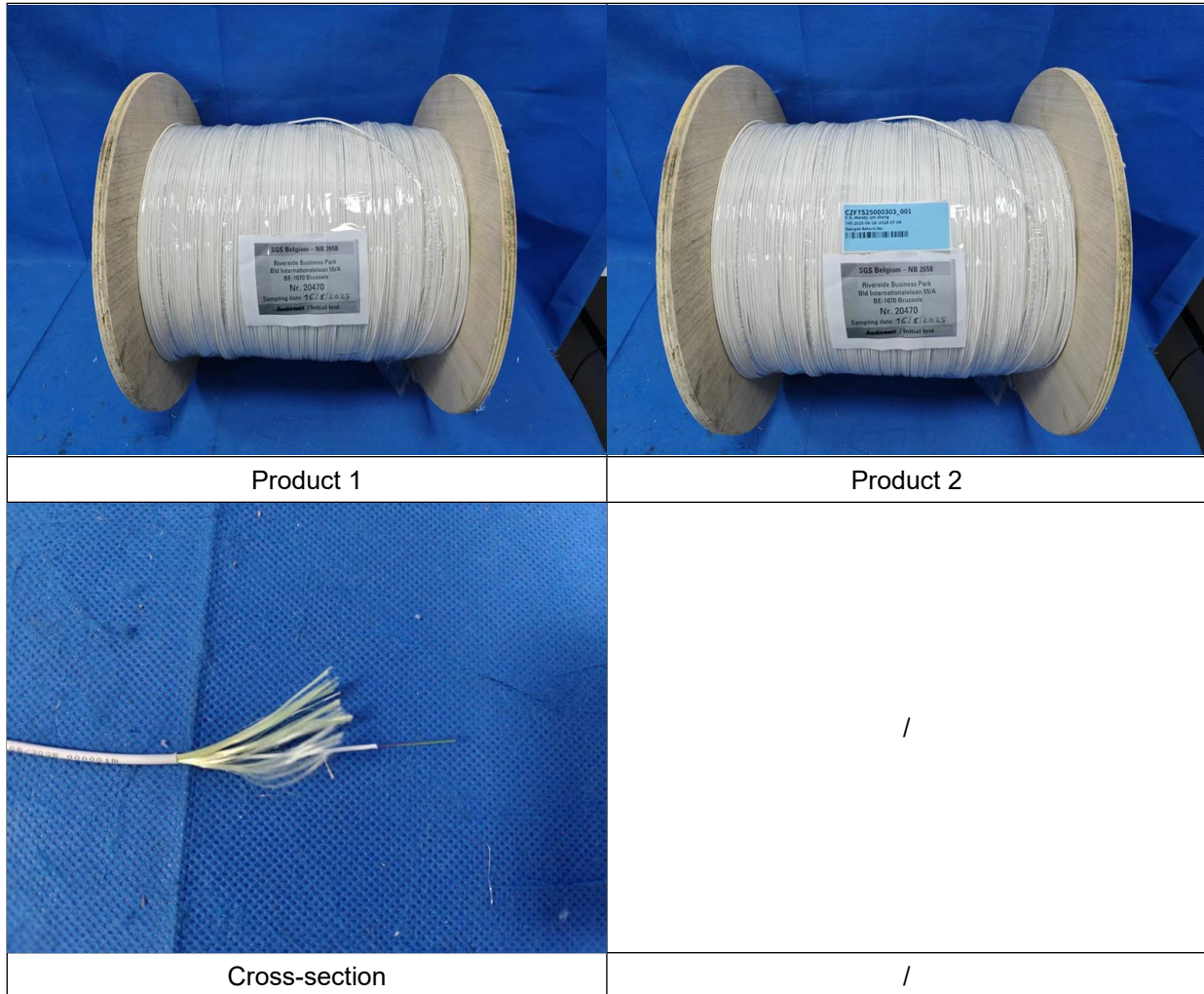
(6) The smoke class declared for class B_{2ca}, C_{ca}, D_{ca} cables shall originate from the test according to EN 50399 (20,5 kW flame source)



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Photo Appendix:



SGS authenticate the photo on original report only

Test applied for by SGS Belgium N.V Division SGS CEPEC. Boulevard Internationalelaan 55, B-1070 Brussel - Belgium, on behalf of Shanghai Jingsheng Communication Technology Co., LTD

End of Report



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