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NOTIFIED BODY
Nr 2659

BELAC
N° 060-TEST
ISO 17025

Liège, 13th July, 2023.

TEST REPORT

Nr 2488-1/2023

EN 60332-1-2 **Nov. 2004** **A12 2021**	**TESTS ON ELECTRIC AND OPTICAL FIBRE CABLES UNDER FIRE CONDITIONS** **Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame**

1. Test applied by: Mr J. Vander Beken for TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.

2. Type of cable (*: information given by the sponsor):
   ISSeP nr: LF1084
   *Reference: TELETASK.be – TDS900004ZH
   Cable marking: -.
   Diameter: ~ 6.6 mm.
   Colour of the outer sheath: blue
   Date of samples reception: 30th June 2023.
   The product is defined as a communication cable according to EN 50575.

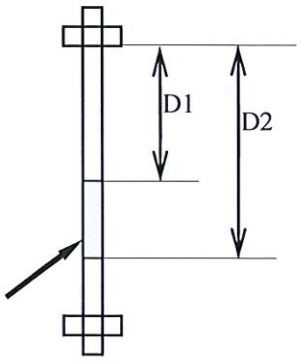
3. Sampling: not carried out by the laboratory.

4. Procedure: see §. 5 of IEC 60332-1-2 standard.

5. Date of the test: 12th July 2023.

6. Results:

   Test nr : CVU 3143
   Duration of flame application: 60 s
   Time to ignition: 6 s
   After flame duration: 18 s
   Distance D1: 46 cm
   Distance D2: 49.5 cm



7. Classification:

Cable described in 2 meets the requirements of annex A of EN 60332-1-2.

I. DYAKOV,
Test Executive

Wallonie

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ISO 17025

Liège, 14th July 2023.

TEST REPORT

Nr 2488-2/2023

EUROPEAN STANDARD

CENELEC **EN 50399** **2022**	**Common test methods for cables under fire conditions** **Heat release and smoke production measurement on cables during flame spread test** **Test apparatus, procedures, results**

1. Test applied by: Mr J. Vander Beken for TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.

2. Type of cable (*: information given by the sponsor):
   ISSeP nr: LF1084
   *Reference: TELETASK.be – TDS900004ZH
   Cable marking: -.
   Diameter: ~ 6.6 mm.
   Colour of the outer sheath: blue
   Date of samples reception: 30th June 2023.
   The product is defined as a communication cable according to EN 50575.

3. Sampling: not carried out by the laboratory.

4. Conditioning: The test specimens have been conditioned for at least 48 hours in indoor at a temperature of 20 ± 10 °C prior to testing.

5. Procedure: see § 6 of EN 50399. Test for Euroclasses $B2_{ca}$, C_{ca} and D_{ca}.

6. Date of the test: 7th July 2023.

7. Test results: see page 2/4

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Test Executive

Wallonie

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Test Conditions:

- Cable length: 3.5 m.
- Number of cable lengths: 21
- Cables mounting: one layer with bundles spaced by one diameter.
- Width of the mounted cables: ~ 28 cm.
- Backing board: no.
- Burner power: 20.5 kW.
- Air flow through the chamber: 480 ± 24 m^3/h.

Results

Test nr: FIP/3148

Heat Release & Flame Spread

- THR_{1200} (Total Heat Released) (MJ): 10
- HRR_{peak} (Peak of Heat Release Rate) (kW): 20
- FIGRA (FIre Growth RAte) (W/s): 77
- FS (Flame Spread) (m) : 1.5

Smoke Production

- TSP_{1200} (Total Smoke Production) (m^2): 22
- SPR_{peak} (Peak of smoke production) (m^2/s): 0.04

Flaming droplets

- Yes, persisting less than 10 s

NB: Heat release rate and total heat released are given without the burner part.

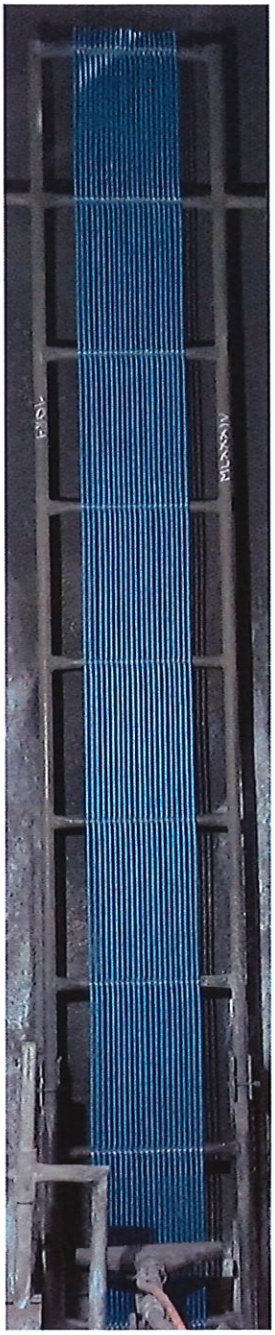

Photo 1 : Cable before test

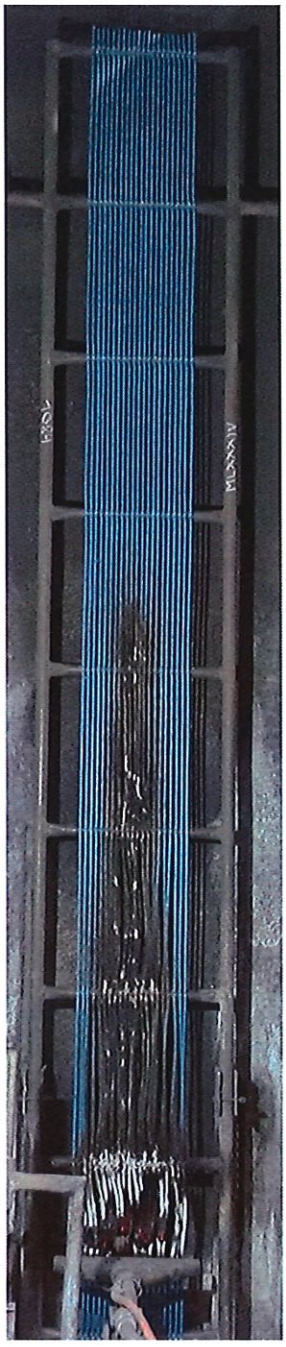

Photo 2 : Cable after test

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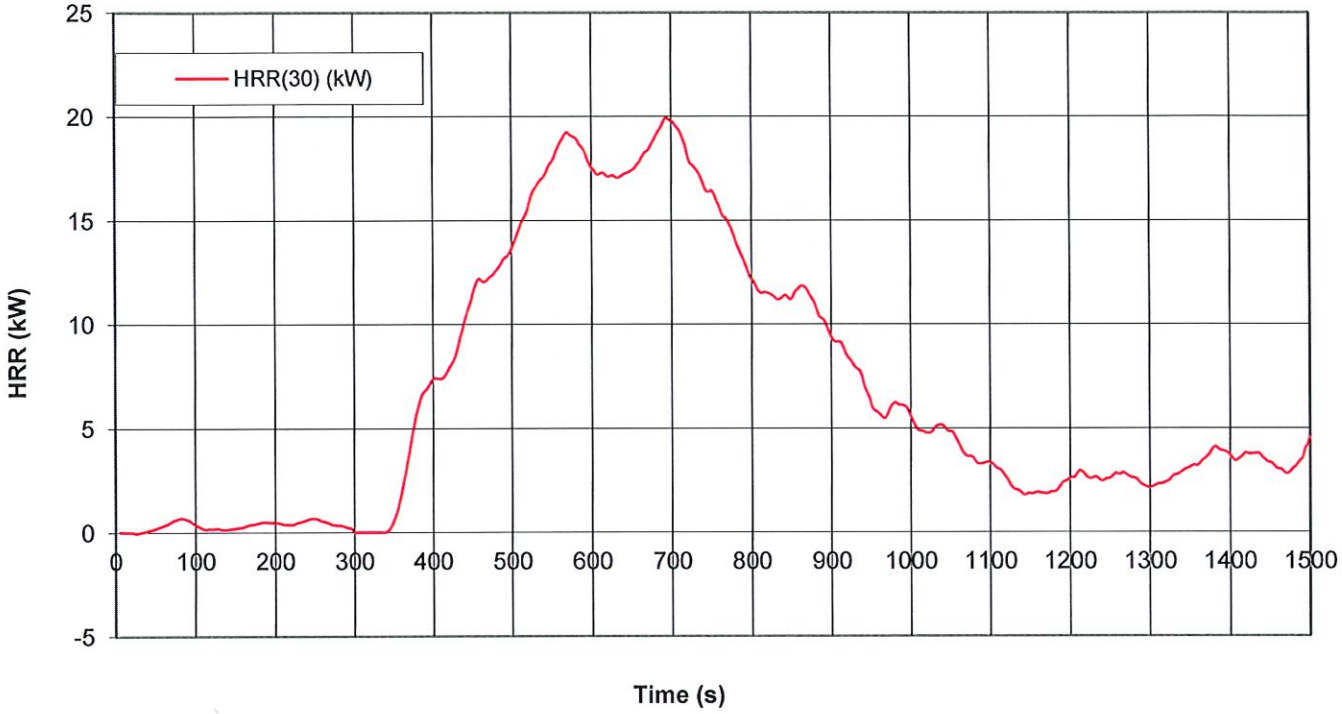
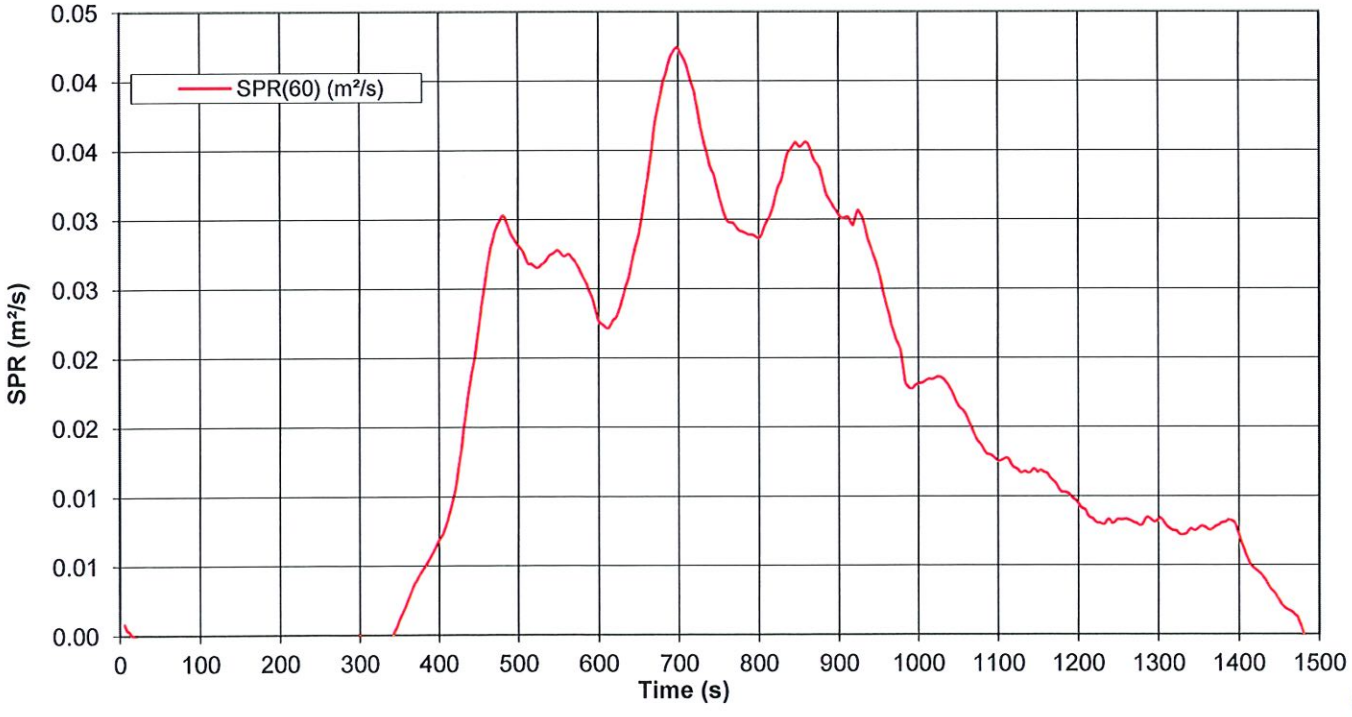
Test nr: FIP/ 3148 **Date**: 07-07-23

ISSeP nr: LF1084 **Cable ref.**: TELETASK.be – TDS900004ZH

Heat Release Rate



Smoke Production Rate



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N° 060-TEST
ISO 17025

Liège, the 25th July 2023.

TEST REPORT

Nr 2488-3/2023

EUROPEAN STANDARD

EN 61034-2 **August 2005** **Amdt 1, 2013** **Amdt 2, 2020**	**Common test methods for cables under fire conditions** **Measurement of smoke density of cables burning under defined conditions** **Part 2 – Test procedure and requirements**

1. Test applied by: Mr J. Vander Beken for TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.

2. Type of cable (*: information given by the sponsor):
   ISSeP nr: LF1084
   *Reference: TELETASK.be – TDS900004ZH
   Cable marking: -.
   Diameter: ~ 6.6 mm.
   Colour of the outer sheath: blue
   Date of samples reception: 30th June 2023.
   The product is defined as a communication cable according to EN 50575.

3. Sampling: not carried out by the laboratory.

4. Procedure: see § 6 of the IEC 61034-2.

5. Date of the test: 13th July 2023.

6. Performance requirements:
   The requirement shall be given in the relevant cable specification.
   Note (§7 of IEC 61034-2): If no value is given in the relevant cable specification, it is recommended that a minimum value of 60 % is adopted.

7. Results:

   Test nr: CUB/821
   Number of cables: 6.
   Minimum of light transmittance measured I_t/I_0: 94 %

I. DYAKOV,
Test Executive

Wallonie

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Nr 2659

BELAC
N° 060-TEST
ISO 17025

Liège, 25th July 2023

TEST REPORT

Nr 2488-4/2023

EUROPEAN STANDARD

EN 60754-2 **April 2014** **Amendement 1 – 2020**	**TEST ON GASES EVOLVED DURING COMBUSTION OF MATERIALS FROM CABLES** **Part 2: Determination of acidity (by pH measurement) and conductivity**

1. Test applied by: Mr J. Vander Beken for TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.

2. Type of cable (*: information given by the sponsor):
   ISSeP nr: LF1084
   *Reference: TELETASK.be – TDS900004ZH
   Cable marking: -.
   Diameter: ~ 6.6 mm.
   Tested material: external sheath
   Color (tested material): blue
   Date of samples reception: 30th June2023.

3. Sampling: not carried out by the laboratory.

4. Conditioning: The specimens have been conditioned for at least one week at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5 % prior to testing.

5. Procedure: see § 7 of IEC 60754-2 standard.

6. Dates of the end of tests: 25th July 2023.

7. Tests results: **pH: 5.0**
   conductivity κ_{25}: 0.2 µS/mm

I. DYAKOV
Test executive

Wallonie

Remarks: - This test report testifies only to the performances of the object actually tested, and does not presume of performance of similar object;
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Procedure:

A pre-determined quantity (1g) of the test material (usually taken from the insulator or the sheath of an electrical cable) is burned in a tube furnace at a temperature higher or equal to 935 °C.
The evolved gases are trapped by bubbling through bottles filled with distilled or demineralized water.
The determination of the degree of acidity of gases is made by measuring pH and conductivity of the solution.

Method: general / ~~simplified~~

Results:
NB: The conductivities and pH are measured at 25 °C.

Sample description: external sheath, blue

Test Nr.	pH	κ_{25} (µS/mm)
B901/1	5.0	0.2
B901/2	5.0	0.2
B901/3	4.9	0.2
Average	5.0	0.2

Recommended values Annex A IEC 60754-2 (informative):
The pH value should not be less than 4.3, when related to 1 litre of water.
The value of conductivity should not exceed 10 µS/mm.

The weighted pH value should not be less than 4.3, when related to 1 litre of water.
The weighted value of conductivity should not exceed 10 µS/mm.

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BELAC
N° 060-TEST
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Liège, 25th July 2023

TEST REPORT

Nr 2488-5/2023

EUROPEAN STANDARD

EN 60754-2 **April 2014** **Amendement 1 – 2020**	**TEST ON GASES EVOLVED DURING COMBUSTION OF MATERIALS FROM CABLES** **Part 2: Determination of acidity (by pH measurement) and conductivity**

1. Test applied by: Mr J. Vander Beken for TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.

2. Type of cable (*: information given by the sponsor):
   ISSeP nr: LF1084
   *Reference: TELETASK.be – TDS900004ZH
   Cable marking: -.
   Diameter: ~ 6.6 mm.
   Tested material: conductor insulation
   Color (tested material): blue, white, red, black
   Date of samples reception: 30th June2023.

3. Sampling: not carried out by the laboratory.

4. Conditioning: The specimens have been conditioned for at least one week at a temperature of 23 ± 2 °C and a relative humidity of 50 ± 5 % prior to testing.

5. Procedure: see § 7 of IEC 60754-2 standard.

6. Dates of the end of tests: 25th July 2023.

7. Tests results: **pH: 5.5**
   conductivity κ_{25}: 0.2 µS/mm

I. DYAKOV
Test executive

Wallonie

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Procedure:

A pre-determined quantity (1g) of the test material (usually taken from the insulator or the sheath of an electrical cable) is burned in a tube furnace at a temperature higher or equal to 935 °C.
The evolved gases are trapped by bubbling through bottles filled with distilled or demineralized water.
The determination of the degree of acidity of gases is made by measuring pH and conductivity of the solution.

Method: general / ~~simplified~~

Results:
NB: The conductivities and pH are measured at 25 °C.

Sample description: conductor insulation, blue, white, red, black

Test Nr.	pH	κ_{25} (µS/mm)
B902/1	5.5	0.3
B902/2	5.5	0.2
B902/3	5.5	0.2
Average	5.5	0.2

Recommended values Annex A IEC 60754-2 (informative):
The pH value should not be less than 4.3, when related to 1 litre of water.
The value of conductivity should not exceed 10 µS/mm.

The weighted pH value should not be less than 4.3, when related to 1 litre of water.
The weighted value of conductivity should not exceed 10 µS/mm.

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N° 060-TEST
ISO 17025

Reaction to fire classification in accordance with EN 13501-6 : 2018 + A1 2022

A.1 Introduction :

This classification report defines the classification assigned to the cable with reference, TDS90004ZH, in accordance with the procedures given in EN 13501-6 : 2018 + A1 2022 standard.

Sponsor	TELETASK BV, Ottergemsesteenweg Zuid 729, 9000 Gent, Belgium.
Prepared by	ISSeP, rue du Chera, 200, 4000 Liège, Belgique
Notified Body N°	2659
Product name	TDS90004ZH
Classification report N°	2488-6/2023
Issue N°	1
Issue date	26th July 2023

A.2 Details of classified product

A.2 1. General

The product TDS90004ZH is defined as a communication cable in accordance with EN 50575 standard.

A.2 2. Product description

Product description	Communication cable, multi conductor
ISSeP N° :	LF 1084
Colour:	blue
Diameter :	~ 6.6 mm
Sampling, not carried out by ISSeP	-.

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BELAC N° 060-TEST ISO 17025

A.3 Reports and results in support of this classification

A.3 1. Test reports

Name of laboratory	Name of test sponsor	Test reports N°	Test method
ISSeP	Teletask b.v.	2488-1/2023	EN 60332-1-2
ISSeP	Teletask b.v.	2488-2/2023	EN 50399
ISSeP	Teletask b.v.	2488-3/2023	EN 61034-2
ISSeP	Teletask b.v.	2488-4/2023 2488-5/2023	EN 60754-2

A.3 2. Results

Test method	Test N°	Parameter	N° test runs	Results	
				Continuous parameter-mean m / result	Compliance with parameters
EN 60332-1	CVU 3143	Flame spread H	1	35 mm	compliant
EN 50399	FIP 3148	THR_{1200}	1	10 MJ	
		HRR_{peak}	1	20 kW	
		FIGRA	1	77 W/s	
		FS	1	1.5 m	
		TSP_{1200}	1	22 m²	
		SPR_{peak}	1	0.04 m²/s	
		Droplets /particles flaming ≤ 10 s flaming > 10 s	1	 yes no	 not-compliant compliant
EN 61034-2	CUB 821	Minimum light transmittance		94 %	
EN 60754-2	B 901 B 902	weighted pH	3	> 4.3	compliant
		weighted conductivity	3	< 2.5 µS/mm	compliant

A.4 Classification and field of application

A.4 1. Reference of classification

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

A.4 2. Classification

The product, TDS90004ZH, communication cable, in relation to reaction to fire behaviour, is classified: **Cca**

The additional classification in relation to smoke production is: **s1**

The additional classification in relation to flaming droplets / particles is: **d1**

The additional classification in relation to acidity is: **a1**

Reaction to fire classification

C_{ca}	-	s	1	,	d	1	,	a	1

A.4 3. Field of application

This classification is valid for the cable described in A 2.2.

A.5. Limitations

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

The test laboratory has played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of samples tested.

SIGNED	APPROVED
I.Dyakov Test Executive	Hervé Breulet, Head of Accidental Risks Department