

Liège, May 13, 2014

EXAP & CLASSIFICATION REPORT

Nr 1651/2014

Reference documents:

EXAP	CLC/FprTS 50576 (2014). Electric cables - extended application of test results
Classification	2006/751/EC. COMMISSION DECISION of 27 October 2006 amending Decision 2000/147/EC implementing Council Directive 89/106/EEC as regards the classification of the reaction-to-fire performance of construction products FprEN 13501-6 (2012). Fire classification of construction products and building elements — Part 6: Classification using data from reaction to fire tests on electric cables.

1. Test applied by: Mr Alessandro PRISTERA for BERICA CAVI Spa, via della Meccanica 2, IT-36040 Meledo di Sarego (Vicenza).
2. Approved range of cable (*: information given by the sponsor):
ISSeP nr: LCF/EE/14/12/1 - LCF/EE/14/12/4 - LCF/EE/14/12/5.
* Cable reference (range) : EUROSAFE JE-H(St)H 300/500 V.
Cable marking (range): EUROSAFE JE-H(ST)H DIN 4102-12 CEI EN 50200 PH(120) CE.
Cable for control and signaling.
* Manufacturer: BERICA CAVI.
Colour: red.
Date of sample reception: January 30, 2014.

Range of approved sections / sizes:

	From	To
Cable parameter χ	1.486	5.649
Diameter d (mm)	5.6	10.9

See range listing in Annex.

3. Sampling: not carried out by the laboratory.
4. Results: see page 2/2.
5. Classification:

Remark: the tested cables are not power cables. Hence they are not explicitly within the scope of CLC/FprTS 50576. However conditions of § 6.1 of the CLC/FprTS 50576 are fulfilled.

The range of cables described in 2 belongs to Euroclass B2_{ca}, s1, d0


H. BREULET,
Test Executive.

 Remarks: - Tests results are valid only for materials up to tested samples.
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6. Results

6.1 Test according to EN 60332-1-2 (checked by ISSEP): $H < 425$ mm

6.2 Test according to EN 50399: – see reports nr 1627-1/2014, 1628-1/2014 & 1629-1/2014

Parameters measured /calculated / determined according to EN 50399 (2011) THR₁₂₀₀:

Total Heat Released after 20 min (MJ)

- ☐ HRR_{peak} : peak of Heat Release Rate (kW)
- ☐ FIGRA: Fire Growth Rate (W/s)
- ☐ FS: Flame Spread (m)
- ☐ TSP₁₂₀₀: Smoke Production after 20 min (m²)
- ☐ SPR_{peak}: Peak of smoke production (m²/s)
- ☐ Flaming droplets

Parameters calculated / determined according to CLC/FprTS 50576 (2014)

- ☐ $\chi = \frac{c}{d^2} V_{combust}$: Cable parameter
- ☐ d : cable diameter (mm)
- ☐ v_{max} : maximum (i.e. worst) test result for the considered classification parameter (FS, THR₁₂₀₀, FIGRA, Peak HRR, TSP₁₂₀₀ and Peak SPR).
- ☐ v_{sm} : safety margin for the considered parameter (FS, THR₁₂₀₀, FIGRA, Peak HRR, TSP₁₂₀₀ et Peak SPR)
- ☐ v_{class} : value to be used for the considered classification parameter (FS, THR₁₂₀₀, FIGRA, Peak HRR, TSP₁₂₀₀ and Peak SPR).

Table 1 : Heat Release & Flame Spread

Cable size	d	χ	THR ₁₂₀₀ (MJ)	HRR _{peak} (kW)	FIGRA (W/s)	FS (m)
1x2x0.80 mm	5.6	1.486	3.9	14	124	0.98
4x2x0.80 mm	10.9	5.649	4.5	16	86	0.64
2x2x0.80 mm	8.7	2.949	3.5	14	93	0.48
v_{max}			4.5	16	124	0.98
v_{sm}			0.5	1.3	14	0.15
v_{class}			5	17	138	1.13

Table 2 : Smoke production & flaming droplets

Cable size	d	χ	TSP ₁₂₀₀ (m ²)	SPR _{peak} (m ² /s)	Flaming droplets / particles
1x2x0.80 mm	5.6	1.486	6.4	0.03	d0
4x2x0.80 mm	10.9	5.649	8.8	0.02	d0
2x2x0.80 mm	8.7	2.949	4.0	0.02	d0
v_{max}			8.8	0.03	Worst result d0
v_{sm}			2.1	0.003	
v_{class}			11	0.03	

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Annex : cable range details

Size	d mm	χ
1x2x0.80	5.6	1.486
2x2x0.80	8.7	2.949
3x2x0.80	9.4	4.488
4x2x0.80	10.9	5.649

Reference documents:

EXAP	CLC/PrTS 50576 (2014) Electric cables - extended application of test results
Classification	2006/751/EC COMMISSION DECISION of 27 October 2006 amending Decision 2006/147/EC implementing Council Directive 1990/269/EEC as regards the classification of the reaction-to-fire performance of construction products
	EN 13501-6 (2012) Fire classification of construction products and building elements - Part 6: Classification using data from reaction to fire tests on electric cables

1. Test applied by Mr. Alessandro PESTIERA for S&R, A.CAVI Spa, via della Meccanica 2, IT-16040 Melegnano di Sesto (Vercelli).

2. Approved range of cable (if intervention given by the sponsor):
 ISSEP in LCPE/14/124 - LCPE/14/124 - LCPE/14/125.
 Cable reference (range): EX-ROSAFE JE-4150W 300/500 V.
 Cable marking (range): EX-ROSAFE JE-4150W 300/500 V-12 CEI EN 50200 P11 (20) CB.
 Cable intended and signaling:
 Cable for power: MERICA CAVI.
 Date of report accepted: January 30, 2014.

Range of approved test results:

	From	To
Cable parameter χ	1.486	5.649
Diameter d (mm)	5.6	10.9

See range listing in Annex.

3. Sampling: not carried out by the laboratory.

4. Results: see page 12.

Classification:

Remarks: The tested cables are not power cables. Hence they are not explicitly within the scope of CLC/PrTS 50576. However conditions of § 8.1 of the CLC/PrTS 50576 are fulfilled.

The range of cables described in 2 belongs to Euroclass B2, s1, d0.

H. PERLET
Test Executive



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