



Centrum stavebního inženýrství a.s.

Fire Technical Laboratory

AUTHORIZED
BODY No. 212

NOTIFIED
BODY No. 1390

CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH ČSN EN 13501-1+A1:2010

Applicant: Dura-Line CT, s.r.o.
U Písáku 682
763 62 Tlumačov
Czech Republic

Prepared by: Centrum stavebního inženýrství a.s.
Pražská 16
102 00 Praha 10
Czech republic

Product name: *Product family protective pipes*

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Address:
PRAŽSKÁ 16, 102 00 PRAHA 10, Czech Republic, E mail: csias@csias.cz, <http://www.csias.cz>
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Fire Technical Laboratory, E-mail: ptl@csias.cz
Phone: +420 281 017 111, Fax: +420 281 017 455

1. DETAILS OF CLASSIFIED PRODUCT

Nature and end use application:

The product family is defined as a type of products for protecting of cables.

Description:

The product *Product family includes plastic pipes of various diameter*. Tested products are fully described in the test reports in support of the classification listed in clause 2.

Product family contains following products:

Pipe 3/2,1 mm
 Pipe 5/3,5 mm (TOSAF)
 Pipe 5/3,5 mm
 Pipe 6/4 mm
 Pipe 8/5,5 mm
 Pipe DuraMicro DB 10/6 mm LSHF SILICORE
 Pipe DuraMicro DI 10/8 mm LSHF SILICORE
 Pipe 14/10 mm

2. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

2.1 Test reports of Pipe 3/2,1 mm

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P367	ČSN EN ISO 11925-2
		18/440P368	ČSN EN 13823+A1

2.2 Measured values and test results of Pipe 3/2,1:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	0	≤ 120 (B)
	LFS < edge	3	yes	yes (B,C)
	THR_{600s} (MJ)	3	0,9	$\leq 7,5$ (B)
	$SMOGR_A$ (m ² /s ²)	3	0	≤ 30 (s1)
	TSP_{600s} (m ²)	3	16,8	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.3 Test reports of Pipe 5/3,5 mm (TOSTAF)

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P369	ČSN EN ISO 11925-2
		18/440P370	ČSN EN 13823+A1

2.4 Measured values and test results of Pipe 5/3,5 mm (TOSAF):

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	46,1	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	1,3	$\leq 7,5$ (B)
	$SMOGRA$ (m ² /s ²)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m ²)	3	16,7	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.5 Test reports of Pipe 5/3,5 mm

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P371	ČSN EN ISO 11925-2
		18/440P372	ČSN EN 13823+A1

2.6 Measured values and test results of Pipe 5/3,5 mm:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	0	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	0,9	$\leq 7,5$ (B)
	$SMOGRA$ (m ² /s ²)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m ²)	3	19,1	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.7 Test reports of Pipe 6/4 mm:

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P373	ČSN EN ISO 11925-2
		18/440/P374	ČSN EN 13823+A1

2.8 Measured values and test results of Pipe 6/4 mm:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	32,6	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	1,3	$\leq 7,5$ (B)
	$SMOGRA$ (m^2/s^2)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m^2)	3	17,2	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.9 Test reports of Pipe 8/5,5 mm:

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P375	ČSN EN ISO 11925-2
		18/440/P376	ČSN EN 13823+A1

2.10 Measured values and test results of Pipe 8/5,5 mm:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	41,9	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	1,1	$\leq 7,5$ (B)
	$SMOGRA$ (m^2/s^2)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m^2)	3	22,3	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.11 Test reports of Pipe DuraMicro DB 10/6 mm LSHF SILICORE:

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P377	ČSN EN ISO 11925-2
		18/440/P378	ČSN EN 13823+A1

2.12 Measured values and test results of Pipe DuraMicro DB 10/6 mm LSHF SILICORE:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	66,8	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	2,7	$\leq 7,5$ (B)
	$SMOGRA$ (m^2/s^2)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m^2)	3	25,5	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.13 Test reports of Pipe DuraMicro DI 10/8 mm LSHF SILICORE:

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P379	ČSN EN ISO 11925-2
		18/440/P380	ČSN EN 13823+A1

2.14 Measured values and test results Pipe DuraMicro DI 10/8 mm LSHF SILICORE:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	63,3	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	1,8	$\leq 7,5$ (B)
	$SMOGRA$ (m^2/s^2)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m^2)	3	24,1	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

2.15 Test reports of Pipe 14/10 mm:

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	Dura-Line CT, s.r.o.	18/440/P381	ČSN EN ISO 11925-2
		18/440/P382	ČSN EN 13823+A1

2.16 Measured values and test results Pipe 14/10 mm:

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 exposition = 30 s surface flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN ISO 11925-2 exposition = 30 s edge flame attack	$F_s \leq 150$ mm ignition of filter paper	6	yes	yes (B - D)
		6	no	no (d0)
ČSN EN 13823+A1	$FIGRA_{0,2 MJ}$ (W/s)	3	89,6	≤ 120 (B)
	$LFS < edge$	3	yes	yes (B,C)
	$THR_{600 s}$ (MJ)	3	2,9	$\leq 7,5$ (B)
	$SMOGRA$ (m^2/s^2)	3	0	≤ 30 (s1)
	$TSP_{600 s}$ (m^2)	3	19,4	≤ 50 (s1)
	no flaming droplets / particles	3	yes	yes (d0)

3. CLASSIFICATION AND DIRECT FIELD OF APPLICATION**3.1 Reference and direct field of application**

This classification has been carried out in accordance with the clause 11.6, 11.5, 11.9.2, 11.9.3 and 11.10.1 of ČSN EN 13501-1+A1:2010.

3.2 Classification**3.2.1 Classification of products**

Pipe 3/2,1 mm

Pipe 5/3,5 mm (TOSAF)

Pipe 5/3,5 mm

Pipe 6/4 mm

Pipe 8/5,5 mm

Pipe DuraMicro DB 10/6 mm LSHF SILICORE

Pipe DuraMicro DI 10/8 mm LSHF SILICORE

Pipe 14/10 mm

The products listed above, in relation to their reaction to fire behaviour are classified:

B

The additional classification in relation to smoke production is:

s1

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

d0

The format of the reaction to fire classification is:

Fire behaviour		Smoke production				Flaming droplets	
B	-	s	1	,	d	0	

Reaction to fire classification: B-s1, d0

3.3 Field of application

Classification is valid for the following end use conditions:

- Product fixed vertically or horizontally on substrates of reaction to fire class A1 or A2.
- Fixing of more pipes: valid for spacing between pipes at least 850 mm.

4. LIMITATIONS


Restrictions

This classification report is valid, provided that the technical specifications of the product will not be changed.

Warning


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

Prepared:


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Jiří Socha



Reviewed:


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Vít Slaboch
technical manager of laboratory