



# 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  
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**Product name:** *Product family protective pipes and bunches*

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## 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 DuraDuct Silicore 32/26 mm  
 Bunch DuraMulti DI 4x5/3,5 mm  
 Bunch DuraMulti DI 7x5/3,5 mm  
 Bunch DuraMulti DI 12x5/3,5 mm  
 Bunch DuraMulti DI 24x5/3,5 mm

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

### 2.1 Test reports of Pipe DuraDuct Silicore 32/26 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/P383          | ČSN EN ISO 11925-2 |
|                                     |                      | 18/440P384           | 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<br>exposition = 30 s<br>surface flame attack | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>edge flame attack    | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN 13823+A1   | $FIGRA_{0,4 MJ}$ (W/s)                        | 3              | 300,5                         | $\leq 750$ (D)        |
|   | LFS < edge                                    | 3              | yes                           | yes (B,C)             |
|   | $THR_{600s}$ (MJ)                             | 3              | 13,7                          | $\leq 15$ (C)         |
|   | SMOGRA ( $m^2/s^2$ )                          | 3              | 12,0                          | $\leq 30$ (s1)        |
|   | $TSP_{600s}$ ( $m^2$ )                        | 3              | 87,4                          | $\leq 200$ (s2)       |
|   | flaming droplets / particles (s)              | 3              | >15                           | >10 (d2)              |

**2.3 Test reports of Bunch DuraMulti DI 4x5/3,5 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/P385          | ČSN EN ISO 11925-2 |
|                                     |                      | 18/440P386           | ČSN EN 13823+A1    |

**2.4 Measured values and test results of Bunch DuraMulti DI 4x5/3,5 mm:**

| Test method   | Parameter                                     | Number of test | Results                       |                       |
|---|---|----------------|-------------------------------|-----------------------|
|   |   |                | Continuous parameter mean (m) | Compliance parameters |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>surface flame attack | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>edge flame attack    | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN 13823+A1   | $FIGRA_{0,2 MJ}$ (W/s)                        | 3              | 53,3                          | $\leq 120$ (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                             | $\leq 30$ (s1)        |
|   | $TSP_{600 s}$ ( $m^2$ )                       | 3              | 26,4                          | $\leq 50$ (s1)        |
|   | no flaming droplets / particles               | 3              | yes                           | yes (d0)              |

**2.5 Test reports of Bunch DuraMulti DI 7x5/3,5 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/P387          | ČSN EN ISO 11925-2 |
|                                     |                      | 18/440P388           | ČSN EN 13823+A1    |

**2.6 Measured values and test results of Bunch DuraMulti DI 7x5/3,5 mm:**

| Test method   | Parameter                                     | Number of test | Results                       |                       |
|---|---|----------------|-------------------------------|-----------------------|
|   |   |                | Continuous parameter mean (m) | Compliance parameters |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>surface flame attack | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>edge flame attack    | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN 13823+A1   | $FIGRA_{0,2 MJ}$ (W/s)                        | 3              | 109,8                         | $\leq 120$ (B)        |
|   | $LFS < edge$                                  | 3              | yes                           | yes (B,C)             |
|   | $THR_{600 s}$ (MJ)                            | 3              | 4,1                           | $\leq 7,5$ (B)        |
|   | $SMOGRA$ ( $m^2/s^2$ )                        | 3              | 0                             | $\leq 30$ (s1)        |
|   | $TSP_{600 s}$ ( $m^2$ )                       | 3              | 32,1                          | $\leq 50$ (s1)        |
|   | no flaming droplets / particles               | 3              | yes                           | yes (d0)              |

**2.7 Test reports of Bunch DuraMulti DI 12x5/3,5 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/P389          | ČSN EN ISO 11925-2 |
|                                     |                      | 18/440/P390          | ČSN EN 13823+A1    |

**2.8 Measured values and test results of Bunch DuraMulti DI 12x5/3,5 mm:**

| Test method   | Parameter                                     | Number of test | Results                       |                       |
|---|---|----------------|-------------------------------|-----------------------|
|   |   |                | Continuous parameter mean (m) | Compliance parameters |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>surface flame attack | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>edge flame attack    | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN 13823+A1   | $FIGRA_{0,4MJ}$ (W/s)                         | 3              | 129,2                         | $\leq 250$ (C)        |
|   | LFS < edge                                    | 3              | yes                           | yes (B,C)             |
|   | $THR_{600s}$ (MJ)                             | 3              | 9,2                           | $\leq 15$ (C)         |
|   | SMOGRA ( $m^2/s^2$ )                          | 3              | 4,7                           | $\leq 30$ (s1)        |
|   | $TSP_{600s}$ ( $m^2$ )                        | 3              | 43,3                          | $\leq 50$ (s1)        |
|   | no flaming droplets / particles               | 3              | yes                           | yes (d0)              |

**2.9 Test reports of Bunch DuraMulti DI 24x5/3,5 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/P391          | ČSN EN ISO 11925-2 |
|                                     |                      | 18/440/P392          | ČSN EN 13823+A1    |

**2.10 Measured values and test results of Bunch DuraMulti DI 24x5/3,5 mm:**

| Test method   | Parameter                                     | Number of test | Results                       |                       |
|---|---|----------------|-------------------------------|-----------------------|
|   |   |                | Continuous parameter mean (m) | Compliance parameters |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>surface flame attack | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN ISO 11925-2<br>exposition = 30 s<br>edge flame attack    | $F_s \leq 150$ mm<br>ignition of filter paper | 6              | yes                           | yes (B - D)           |
|   |   | 6              | no                            | no (d0)               |
| ČSN EN 13823+A1   | $FIGRA_{0,4MJ}$ (W/s)                         | 3              | 207,6                         | $\leq 250$ (C)        |
|   | LFS < edge                                    | 3              | yes                           | yes (B,C)             |
|   | $THR_{600s}$ (MJ)                             | 3              | 15,8                          | > 15 (D)              |
|   | SMOGRA ( $m^2/s^2$ )                          | 3              | 7,3                           | $\leq 30$ (s1)        |
|   | $TSP_{600s}$ ( $m^2$ )                        | 3              | 66,6                          | $\leq 200$ (s2)       |
|   | flaming droplets / particles (s)              | 3              | >10                           | >10 (d2)              |

### 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

**Bunch DuraMulti DI 4x5/3,5 mm**

**Bunch DuraMulti DI 7x5/3,5 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**

##### 3.2.2 Classification of the product Pipe DuraDuct Silicore 32/26 mm

The product **Pipe DuraDuct Silicore 32/26 mm**, in relation to its reaction to fire behaviour are classified:

**D**

The additional classification in relation to smoke production is:

**s2**

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

**d2**

The format of the reaction to fire classification is:

| Fire behaviour |   | Smoke production |   |   |   | Flaming droplets |  |
|----------------|---|------------------|---|---|---|------------------|--|
| D              | - | s                | 2 | , | d | 2                |  |

**Reaction to fire classification: D-s2, d2**

### 3.2.3 Classification of the product Bunch DuraMulti DI 12x5/3,5 mm

The product **Bunch DuraMulti DI 12x5/3,5 mm**, in relation to its reaction to fire behaviour are classified:

**C**

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 |  |
|----------------|---|------------------|---|---|---|------------------|--|
| C              | - | s                | 1 | , | d | 0                |  |

**Reaction to fire classification: C-s1, d0**

### 3.2.4 Classification of the product Bunch DuraMulti DI 24x5/3,5 mm

The product **Bunch DuraMulti DI 24x5/3,5 mm**, in relation to its reaction to fire behaviour are classified:

**D**

The additional classification in relation to smoke production is:

**s2**

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

**d2**

The format of the reaction to fire classification is:

| Fire behaviour |   | Smoke production |   |   |   | Flaming droplets |  |
|----------------|---|------------------|---|---|---|------------------|--|
| D              | - | s                | 2 | , | d | 2                |  |

**Reaction to fire classification: D-s2, d2**

### 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 or bunches at least 850 mm.

## 4. LIMITATIONS

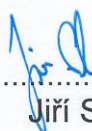
### Restrictions

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:



Jiří Socha



Reviewed:



Vít Slaboch  
technical manager of laboratory