

DECLARATION OF PERFORMANCE

No.: DoP 5/2026

1. Unique identification code of product-type:

INTU FR UNIBOARD

2. Intended uses:

The intended use of INTU FR UNIBOARD is to reinstate the fire resistance performance of flexible wall, rigid wall or rigid floor constructions, where they are penetrated by metal pipes or combustible pipes, cables, cable ladders, cable trays and conduits.

3. Manufacturer:

**ALFASEAL GROUP Sp. z o.o.
ul. Kineskopowa 1, 05-500 Piaseczno**

4. Authorized representative:

Not applicable

5. System or systems of Assessment and Verification of Constancy of Performance (AVCP):

System 1

6a. Harmonised standard:

Not applicable

Notified body or bodies:

Not applicable

6b. European Assessment Document:

EAD 350454-00-1104

European Technical Assessment:

ETA-24/1047 of 10/06/2026

Technical Assessment Body:

ITB, ul. Filtrów 1, 00-611 Warszawa

Notified body or bodies:

No. 1488

7. Declared performance:

Table 1.

Basic requirements	Performance characteristics
BWR 2 Safety in case to fire	
Reaction to fire	NPD
Resistance to fire	Tables B1 ÷ B19

Table B1. Resistance to fire classification of plastic pipes without insulation penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of double-sided INTU FR COLLAR L SLIM and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Insulation thickness [mm]	Number of collars x intumescent material width x thickness [mm]	Fire resistance class
PE-HD / PE / PE-X / ABS / SAN + PVC	$D \leq 75$	3,0 – 6,8	-	2 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	3,5 – 8,2	-	2 x 30,0 x 8,0	
	$90 < D \leq 110$	4,2 – 10,0	-	2 x 30,0 x 10,0	
PP	$D \leq 75$	1,9 – 12,5	-	2 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	2,2 – 15,0	-	2 x 30,0 x 8,0	
	$90 < D \leq 110$	2,7 – 18,3	-	2 x 30,0 x 10,0	
PP-R	$D \leq 20$	$\geq 2,3$	-	2 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$20 < D \leq 25$	$\geq 2,7$	-	2 x 30,0 x 4,0	
	$25 < D \leq 32$	3,3 – 12,5	-	2 x 30,0 x 4,0	
	$32 < D \leq 40$	3,9 – 12,5	-	2 x 30,0 x 4,0	
	$40 < D \leq 50$	4,8 – 12,5	-	2 x 30,0 x 4,0	
	$50 < D \leq 63$	5,8 – 12,5	-	2 x 30,0 x 4,0	
	$63 < D \leq 75$	6,8 – 12,5	-	2 x 30,0 x 4,0	
	$75 < D \leq 90$	8,2 – 15,0	-	2 x 30,0 x 8,0	
	$90 < D \leq 110$	10,0 – 18,3	-	2 x 30,0 x 10,0	
PVC-U / PVC-C	$D \leq 75$	1,8 – 5,6	-	2 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	1,9 – 6,7	-	2 x 30,0 x 8,0	
	$90 < D \leq 110$	2,0 – 8,1	-	2 x 30,0 x 10,0	

Table B2. Resistance to fire classification of plastic pipes with polyethylene foam (PE) continuous insulation (case CS), placed on the floor, penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of double-sided INTU FR COLLAR L SLIM (U-shaped) and double INTU FR UNIBOARD 1S

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Insulation thickness x length [mm]	Number of collars x intumescent material width x thickness [mm]	Fire resistance class
PP-R	$D \leq 20$	2,3	9	2 x 30,0 x 10,0	EI 120-U/C EI 120-C/C
		6,9	25	2 x 30,0 x 10,0	EI 120-U/C EI 120-C/C
		7,0 – 12,5	25	2 x 30,0 x 10,0	EI 90-U/C EI 90-C/C
	$20 < D \leq 50$	6,9	25	2 x 30,0 x 10,0	EI 120-U/C EI 120-C/C
		7,0 – 12,5	25	2 x 30,0 x 10,0	EI 90-U/C EI 90-C/C
	$50 < D \leq 75$	12,5	25	2 x 30,0 x 10,0	EI 90-U/C EI 90-C/C

Table B3. Resistance to fire classification of PP-R pipes with Tubolit DG polyethylene foam (PE) continuous insulation (case CS), placed on the floor, with following dimensions:

- pipe No. 1: diameter of: $D \leq 20$ mm, pipe wall thickness of: $t = 2,3$ mm, Tubolit DG insulation thickness of: 9 mm,
- pipe No. 2: diameter of: $D \leq 50$ mm, pipe wall thickness of: $t = 6,9$ mm Tubolit DG insulation thickness of: 25 mm

penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of double-sided INTU FR COLLAR L SLIM (U-shaped) and INTU FR UNIBOARD 1S:

Fire resistance class: EI 120-U/C EI 120-C/C

Table B4. Resistance to fire classification of PE-HD / PE / PE-X / ABS / SAN + PVC pipes without insulation penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of double-sided INTU FR COLLAR L SLIM and INTU FR UNIBOARD 2S:

Pipe diameter [mm]	Pipe wall thickness [mm]	Insulation thickness [mm]	Number of collars x intumescent material width x thickness [mm]	Fire resistance class
$D \leq 75$	3,0 – 6,8	-	2 x 30,0 x 4,0	EI 60 / E 90-U/C EI 60 / E 90-C/C
$75 < D \leq 90$	3,5 – 8,2	-	2 x 30,0 x 8,0	
$90 < D \leq 110$	4,2 – 10,0	-	2 x 30,0 x 10,0	
$D \leq 75$	3,0 – 6,8	-	2 x 30,0 x 4,0	EI 60 / E 90-U/C ¹⁾ EI 60 / E 90-C/C ¹⁾
$75 < D \leq 90$	3,5 – 8,2	-	2 x 30,0 x 8,0	
$90 < D \leq 110$	4,2 – 10,0	-	2 x 30,0 x 10,0	
$D \leq 75$	3,0	-	2 x 30,0 x 4,0	EI 90 / E 120-U/C ²⁾ EI 90 / E 120-C/C ²⁾
	3,1 – 6,8	-	2 x 30,0 x 4,0	EI 60 / E 120-U/C ²⁾ EI 60 / E 120-C/C ²⁾
$75 < D \leq 90$	3,5 – 6,0	-	2 x 30,0 x 8,0	EI 90 / E 120-U/C ²⁾ EI 90 / E 120-C/C ²⁾
	6,1 – 8,2	-	2 x 30,0 x 8,0	EI 60 / E 120-U/C ²⁾ EI 60 / E 120-C/C ²⁾
$90 < D \leq 110$	4,2 – 10,0	-	2 x 30,0 x 10,0	EI 90 / E 120-U/C ²⁾ EI 90 / E 120-C/C ²⁾

¹⁾ valid only in case of fire acting from the mineral wool board side

²⁾ valid only in case of fire acting from the opposite side to the mineral wool board

Table B5. Resistance to fire classification of plastic pipes without insulation penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of one-sided INTU FR COLLAR L SLIM and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Insulation thickness [mm]	Number of collars x intumescent material width x thickness [mm]	Fire resistance class
PE-HD / PE / PE-X / ABS / SAN + PVC	$D \leq 75$	3,0 – 6,8	-	1 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	3,5 – 8,2	-	1 x 30,0 x 8,0	
	$90 < D \leq 110$	4,2 – 10,0	-	1 x 30,0 x 10,0	
	$110 < D \leq 125$	5,8 – 9,9	-	2 x 30,0 x 14,0	
	$125 < D \leq 160$	9,5	-	2 x 30,0 x 18,0	
PP	$D \leq 75$	1,9 – 12,5	-	1 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	2,2 – 15,0	-	1 x 30,0 x 8,0	
	$90 < D \leq 110$	2,7 – 18,3	-	1 x 30,0 x 10,0	
	$110 < D \leq 125$	3,1 – 14,0	-	2 x 30,0 x 14,0	
	$125 < D \leq 160$	3,9	-	2 x 30,0 x 18,0	
PP-R	$D \leq 20$	$\geq 2,3$	-	1 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$20 < D \leq 25$	$\geq 2,7$	-	1 x 30,0 x 4,0	
	$25 < D \leq 32$	3,3 – 12,5	-	1 x 30,0 x 4,0	
	$32 < D \leq 40$	3,9 – 12,5	-	1 x 30,0 x 4,0	
	$40 < D \leq 50$	4,8 – 12,5	-	1 x 30,0 x 4,0	
	$50 < D \leq 63$	5,8 – 12,5	-	1 x 30,0 x 4,0	
	$63 < D \leq 75$	6,8 – 12,5	-	1 x 30,0 x 4,0	
	$75 < D \leq 90$	8,2 – 15,0	-	1 x 30,0 x 8,0	
	$90 < D \leq 110$	10,0 – 18,3	-	1 x 30,0 x 10,0	
PVC-U / PVC-C	$D \leq 75$	1,8 – 5,6	-	1 x 30,0 x 4,0	EI 120-U/C EI 120-C/C
	$75 < D \leq 90$	1,9 – 6,7	-	1 x 30,0 x 8,0	
	$90 < D \leq 110$	2,0 – 8,1	-	1 x 30,0 x 10,0	

Table B6. Resistance to fire classification of PE-HD / PE / PE-X / ABS / SAN + PVC pipes without insulation penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of one-sided INTU FR COLLAR L SLIM and INTU FR UNIBOARD 2S:

Pipe diameter [mm]	Pipe wall thickness [mm]	Insulation thickness [mm]	Number of collars x intumescent material width x thickness [mm]	Fire resistance class
$D \leq 75$	3,0 – 6,8	-	1 x 30,0 x 4,0	EI 90-U/C EI 90-C/C
$75 < D \leq 90$	3,5 – 8,2	-	1 x 30,0 x 8,0	
$90 < D \leq 110$	4,2 – 10,0	-	1 x 30,0 x 10,0	

Table B7. Resistance to fire classification of plastic pipes without insulation penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with double-sided INTU FR GRAPHITE mass and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	INTU FR GRAPHITE mass width x thickness [mm]	Fire resistance class
PP	$D \leq 75$	1,9 – 12,4	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		12,5 – 18,3	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
	$75 < D \leq 90$	2,2 – 14,9	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		15,0 – 18,3	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
	$90 < D \leq 110$	2,7 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
PP-R	$D \leq 20$	$\geq 2,8$	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		$\geq 3,2$	2 x 25,0 x 10,0 – 20,0	
		$\geq 3,8$	2 x 25,0 x 10,0 – 20,0	
	$20 < D \leq 25$	$\geq 3,8$	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		$\geq 3,8$	2 x 25,0 x 10,0 – 20,0	
	$25 < D \leq 32$	$\geq 3,8$	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		$\geq 3,8$	2 x 25,0 x 10,0 – 20,0	
	$32 < D \leq 40$	4,4 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
	$40 < D \leq 50$	5,2 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
	$50 < D \leq 63$	6,2 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
	$63 < D \leq 75$	7,2 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
	$75 < D \leq 90$	8,4 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 90-U/C EI 90-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
	$90 < D \leq 110$	10,0 – 18,2	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		18,3	2 x 25,0 x 10,0 – 20,0	
PVC-U / PVC-C	$D \leq 75$	1,5 – 1,9	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		2,0	2 x 25,0 x 10,0 – 20,0	EI 60 / E 90-U/C EI 60 / E 90-C/C
		2,1 – 8,1	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
	$75 < D \leq 90$	1,7 – 1,9	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		2,0	2 x 25,0 x 10,0 – 20,0	EI 60 / E 90-U/C EI 60 / E 90-C/C
		2,1 – 8,1	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
	$90 < D \leq 110$	2,0	2 x 25,0 x 10,0 – 20,0	EI 60 / E 90-U/C EI 60 / E 90-C/C
		2,1 – 8,1	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		2,1 – 8,1	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C
		2,1 – 8,1	2 x 25,0 x 10,0 – 20,0	EI 45-U/C EI 45-C/C

Table B8. Resistance to fire classification of plastic pipes without insulation penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with one-sided INTU FR GRAPHITE mass and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	INTU FR GRAPHITE mass depth x width [mm]	Fire resistance class
PP-R	$D \leq 20$	$\geq 2,3$	$1 \times 50,0 \times 10,0 - 20,0$	EI 90-U/C EI 90-C/C
	$20 < D \leq 25$	$\geq 2,7$	$1 \times 50,0 \times 10,0 - 20,0$	
	$25 < D \leq 32$	$3,3 - 12,5$	$1 \times 50,0 \times 10,0 - 20,0$	
	$32 < D \leq 40$	$3,9 - 12,5$	$1 \times 50,0 \times 10,0 - 20,0$	
	$40 < D \leq 50$	$4,8 - 12,5$	$1 \times 50,0 \times 10,0 - 20,0$	
	$50 < D \leq 63$	$5,8 - 12,5$	$1 \times 50,0 \times 10,0 - 20,0$	
	$63 < D \leq 75$	$6,8 - 12,5$	$1 \times 50,0 \times 10,0 - 20,0$	
	$75 < D \leq 90$	$8,2 - 15,0$	$1 \times 50,0 \times 10,0 - 20,0$	
PVC-U / PVC-C	$90 < D \leq 110$	$10,0 - 18,3$	$1 \times 50,0 \times 10,0 - 20,0$	EI 90-U/C EI 90-C/C
	$D \leq 75$	$1,5 - 8,1$	$1 \times 50,0 \times 10,0 - 20,0$	
	$75 < D \leq 90$	$1,7 - 8,1$	$1 \times 50,0 \times 10,0 - 20,0$	
	$90 < D \leq 110$	$2,0 - 8,1$	$1 \times 50,0 \times 10,0 - 20,0$	

Table B9. Resistance to fire classification of metal pipes with mineral wool local sustained insulation (case LS) penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness g x length L_w [mm]	INTU FR UNIBOARD 1S number of layers x thickness [mm]	Fire resistance class
copper	$D \leq 28,0$	$\geq 1,0$	20×500	2×50 or 60	EI 120-C/U EI 120-C/C
	$28,0 < D \leq 33,7$	$\geq 1,1$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$33,7 < D \leq 42,4$	$\geq 1,2$	50×700	2×50 or 60	
	$42,4 < D \leq 54,0$	$\geq 1,4$	50×700	2×50 or 60	
	$54,0 < D \leq 66,7$	$\geq 1,6$	50×700	2×50 or 60	
	$66,7 < D \leq 76,1$	$\geq 1,8$	50×700	2×50 or 60	
steel	$D \leq 67,0$	$\geq 2,0$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$67,0 < D \leq 76,1$	$1,5 - 3,9$	30×500	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$76,1 < D \leq 88,9$	$1,6 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$88,9 < D \leq 108,0$	$1,8 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$108,0 < D \leq 114,3$	$2,0 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$114,3 < D \leq 139,7$	$2,1 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$139,7 < D \leq 159,0$	$2,6 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$159,0 < D \leq 168,3$	$2,9 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$168,3 < D \leq 193,7$	$3,1 - 3,9$	50×700	2×50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		$\geq 4,0$	50×700	2×50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness g x length L _w [mm]	INTU FR UNIBOARD 1S number of layers x thickness [mm]	Fire resistance class
	168,3 < D ≤ 177,8	3,3 – 3,9	50 x 700	2 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	177,8 < D ≤ 193,7	3,5 – 3,9	50 x 700	2 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 60 / E 120-C/C
	193,7 < D ≤ 219,1	≥ 4,0	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 90 / E 120-C/C

Table B10. Resistance to fire classification of steel pipes with mineral wool local sustained insulation (case LI) penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of INTU FR UNIBOARD 1S:

Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool lamella thickness x length [mm]	Mineral wool board layers x thickness [mm]	Fire resistance class
D ≤ 114,3	≥ 3,6	50 x 500	2 x 50 or 60	EI 90-C/U EI 90-C/C

Table B11. Resistance to fire classification of metal pipes with mineral wool local sustained insulation (case LS) penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of INTU FR UNIBOARD 2S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness g x length L _w [mm]	INTU FR UNIBOARD 2S number of layers x thickness [mm]	Fire resistance class
copper	D ≤ 28,0	≥ 1,0	20 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
	28,0 < D ≤ 33,7	≥ 1,2	30 x 500	1 x 50 or 60	
	33,7 < D ≤ 42,4	≥ 1,6	30 x 500	1 x 50 or 60	
	42,4 < D ≤ 54,0	≥ 2,0	30 x 500	1 x 50 or 60	
copper	D ≤ 28,0	≥ 1,0	20 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
	28,0 < D ≤ 33,7	≥ 1,2	30 x 500	1 x 50 or 60	
	33,7 < D ≤ 42,4	≥ 1,6	30 x 500	1 x 50 or 60	
	42,4 < D ≤ 54,0	≥ 2,0	30 x 500	1 x 50 or 60	
copper	D ≤ 28,0	≥ 1,0	20 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾ EI 60 / E 120-C/C ²⁾
	28,0 < D ≤ 33,7	≥ 1,2	30 x 500	1 x 50 or 60	
	33,7 < D ≤ 42,4	≥ 1,6	30 x 500	1 x 50 or 60	
	42,4 < D ≤ 54,0	≥ 2,0	30 x 500	1 x 50 or 60	
steel	D ≤ 67,0	1,5 – 3,5	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
	67,0 < D ≤ 76,1	1,9 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
	76,1 < D ≤ 88,9	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
	88,9 < D ≤ 108,0	3,3 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
	108,0 < D ≤ 114,3	≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/C
steel	D ≤ 67,0	1,5 – 3,5	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ¹⁾ EI 60 / E 120-C/C ¹⁾
	67,0 < D ≤ 76,1	1,9 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ¹⁾ EI 60 / E 120-C/C ¹⁾
	76,1 < D ≤ 88,9	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U EI 60 / E 120-C/C



Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness $g \times \text{length } L_w$ [mm]	INTU FR UNIBOARD 2S number of layers $\times$ thickness [mm]	Fire resistance class
	$76,1 < D \leq 88,9$	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 120-C/C ¹⁾ EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ¹⁾ EI 60 / E 120-C/C ¹⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
	$88,9 < D \leq 108,0$	3,3 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ¹⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 60 / E 120-C/C ¹⁾
steel	$D \leq 67,0$	1,5 – 3,5	30 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾
		$\geq 3,6$	30 x 500	1 x 50 or 60	EI 60 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/U ²⁾ EI 90 / E 120-C/C ²⁾
	$67,0 < D \leq 76,1$	1,9 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾ EI 60 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/U ²⁾ EI 90 / E 120-C/C ²⁾
	$76,1 < D \leq 88,9$	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾ EI 60 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/U ²⁾ EI 90 / E 120-C/C ²⁾
	$88,9 < D \leq 108,0$	3,3 – 3,5	50 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾ EI 60 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/U ²⁾ EI 90 / E 120-C/C ²⁾
	$108,0 < D \leq 114,3$	$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/U ²⁾ EI 90 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/C ²⁾
		$\geq 3,6$	50 x 500	1 x 50 or 60	EI 90 / E 120-C/C ²⁾

Table B12. Resistance to fire classification of metal pipes with mineral wool local sustained insulation (case LS) penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness $g_w \times \text{length } L_w$ [mm]	INTU FR UNIBOARD 1S number of layers $\times$ thickness [mm]	Fire resistance class
copper	$D \leq 28,0$	$\geq 1,0$	20 x 500	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
	$28,0 < D \leq 33,7$	$\geq 1,1$	50 x 700	2 x 50 or 60	
	$33,7 < D \leq 42,4$	$\geq 1,2$	50 x 700	2 x 50 or 60	
	$42,4 < D \leq 54,0$	$\geq 1,4$	50 x 700	2 x 50 or 60	
	$54,0 < D \leq 66,7$	$\geq 1,6$	50 x 700	2 x 50 or 60	
	$66,7 < D \leq 76,1$	$\geq 1,8$	50 x 700	2 x 50 or 60	
steel	$D \leq 67,0$	$\geq 1,5$	30 x 500	2 x 50 or 60	EI 120-C/U EI 120-C/C
		$\geq 1,5$	30 x 500	2 x 50 or 60	EI 120-C/U EI 120-C/C
	$67,0 < D \leq 76,1$	1,6 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		$\geq 4,0$	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	$76,1 < D \leq 88,9$	1,8 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		$\geq 4,0$	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	$88,9 < D \leq 108,0$	2,0 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		$\geq 4,0$	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	$108,0 < D \leq 114,3$	2,1 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		$\geq 4,0$	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	$114,3 < D \leq 139,7$	2,6 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		$\geq 4,0$	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness g_w x length L_w [mm]	INTU FR UNIBOARD 1S number of layers x thickness [mm]	Fire resistance class
	139,7 < D ≤ 159,0	2,9 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	159,0 < D ≤ 168,3	3,1 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	168,3 < D ≤ 177,8	3,3 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	177,8 < D ≤ 193,7	3,5 – 3,9	50 x 700	2 x 50 or 60	EI 90 / E 120-C/U EI 90 / E 120-C/C
		≥ 4,0	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C
	193,7 < D ≤ 219,1	≥ 4,0	50 x 700	2 x 50 or 60	EI 120-C/U EI 120-C/C

Table B13. Resistance to fire classification of metal pipes with mineral wool local sustained insulation (case LS) penetration seals in rigid wall thickness of: $t \geq 150$ mm, made with use of INTU FR UNIBOARD 2S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness g_w x length L_w [mm]	INTU FR UNIBOARD 2S number of layers x thickness [mm]	Fire resistance class
copper	D ≤ 28,0	≥ 1,0	20 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C
			30 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
	28,0 < D ≤ 33,7	≥ 1,2	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C
	33,7 < D ≤ 42,4	≥ 1,6	30 x 500	1 x 50 or 60	
	42,4 < D ≤ 54,0	≥ 2,0	30 x 500	1 x 50 or 60	
copper	D ≤ 28,0	≥ 1,0	20 x 500	1 x 50 or 60	EI 45 / E 90-C/U ¹⁾ EI 45 / E 90-C/C ¹⁾
			30 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
	28,0 < D ≤ 33,7	≥ 1,2	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U ¹⁾ EI 45 / E 90-C/C ¹⁾
	33,7 < D ≤ 42,4	≥ 1,6	30 x 500	1 x 50 or 60	
	42,4 < D ≤ 54,0	≥ 2,0	30 x 500	1 x 50 or 60	
copper	D ≤ 28,0	1,0 – 1,9	20 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 2,0	20 x 500	1 x 50 or 60	EI 60 / E 120-C/U ²⁾ EI 60 / E 120-C/C ²⁾
			30 x 500	1 x 50 or 60	
			30 x 500	1 x 50 or 60	
	28,0 < D ≤ 33,7	1,2 – 1,9	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 2,0	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
			30 x 500	1 x 50 or 60	
			30 x 500	1 x 50 or 60	
	33,7 < D ≤ 42,4	1,6 – 1,9	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 2,0	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
			30 x 500	1 x 50 or 60	
			30 x 500	1 x 50 or 60	
steel	D ≤ 67,0	1,5 – 3,5	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C
		≥ 3,6	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
			50 x 500	1 x 50 or 60	
	67,0 < D ≤ 76,1	1,9 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
			50 x 500	1 x 50 or 60	
			50 x 500	1 x 50 or 60	
	76,1 < D ≤ 88,9	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	Mineral wool mat thickness $g_w \times \text{length } L_w$ [mm]	INTU FR UNIBOARD 2S number of layers x thickness [mm]	Fire resistance class
	88,9 < D ≤ 108,0	≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		3,3 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U EI 45 / E 90-C/C
	108,0 < D ≤ 114,3	≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U EI 60 / E 90-C/C
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/C
steel	D ≤ 67,0	≥ 1,5	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U ¹⁾ EI 45 / E 90-C/C ¹⁾
		≥ 1,5	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ¹⁾ EI 60 / E 90-C/C ¹⁾
	67,0 < D ≤ 76,1	≥ 1,9	50 x 500	1 x 50 or 60	
	76,1 < D ≤ 88,9	≥ 2,5	50 x 500	1 x 50 or 60	
	88,9 < D ≤ 108,0	≥ 3,3	50 x 500	1 x 50 or 60	
	108,0 < D ≤ 114,3	≥ 3,6	50 x 500	1 x 50 or 60	
steel	D ≤ 67,0	1,5 – 3,5	30 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 3,6	30 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
			50 x 500	1 x 50 or 60	EI 60 / E 90-C/C ²⁾
	67,0 < D ≤ 76,1	1,9 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
	76,1 < D ≤ 88,9	2,5 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
	88,9 < D ≤ 108,0	3,3 – 3,5	50 x 500	1 x 50 or 60	EI 45 / E 90-C/U ²⁾ EI 45 / E 90-C/C ²⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
	108,0 < D ≤ 114,3	≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/U ²⁾ EI 60 / E 90-C/C ²⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/C ²⁾
		≥ 3,6	50 x 500	1 x 50 or 60	EI 60 / E 90-C/C ²⁾

¹⁾ valid only in case of INTU FR UNIBOARD 2S placed on bottom side of the floor

²⁾ valid only in case of INTU FR UNIBOARD 2S placed flush with top side of the floor

Table B14. Resistance to fire classification of metal pipes without insulation penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of double-sided INTU FR UNICOAT P paint and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	INTU FR UNIBOARD 1S number of layers x thickness [mm]	INTU FR UNICOAT P thickness x length L [mm]	Fire resistance class
galvanized steel	D ≤ 42,0	≥ 1,5	2 x 50 or 60	1,0 x 500	EI 60 / E 90-C/U EI 60 / E 90-C/C

Table B15. Resistance to fire classification of metal pipes without insulation penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of double-sided INTU FR UNICOAT P paint and INTU FR UNIBOARD 1S:

Pipe material	Pipe diameter [mm]	Pipe wall thickness [mm]	INTU FR UNIBOARD 1S board layers x thickness [mm]	INTU FR UNICOAT P paint thickness x width [mm]	Fire resistance class
copper	D ≤ 28,0	≥ 1,0	2 x 50 or 60	1 x 500	EI 45 / E 120-C/U EI 45 / E 120-C/C
	28,0 < D ≤ 33,7	≥ 1,2	2 x 50 or 60	1 x 500	EI 30 / E 120-C/U EI 30 / E 120-C/C
	33,7 < D ≤ 42,4	≥ 1,6	2 x 50 or 60	1 x 500	
	42,4 < D ≤ 54,0	≥ 2,0	2 x 50 or 60	1 x 500	
galvanized steel	D ≤ 42,0	≥ 1,5	2 x 50 or 60	1 x 500	EI 90 / E 120-C/U EI 90 / E 120-C/C

Table B16. Resistance to fire classification of cable penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with use of INTU FR UNICOAT P paint and single INTU FR UNIBOARD 1S:

Type of cables	Cable diameter [mm]	INTU FR UNIBOARD 1S layers x thickness [mm]	INTU FR UNICOAT P thickness x length L [mm]	Fire resistance class
Small cables	$\phi \leq 21$	2 x 50 or 60	1,0 x 160,0	EI 90 / E 120
Medium cables	$21 < \phi \leq 50$	2 x 50 or 60	1,0 x 160,0	
Large cables	$50 < \phi \leq 80$	2 x 50 or 60	1,0 x 160,0	
Cable bundle	$\phi_{\text{cable}} \leq 21$	2 x 50 or 60	1,0 x 160,0	
Non-sheathed cables (wires)	$\phi \leq 24$	2 x 50 or 60	1,0 x 160,0	
NYCWY 4x185/95 ¹⁾	according to	2 x 50 or 60	1,0 x 160,0	
N2XH-J 4x185 ¹⁾	according to	2 x 50 or 60	1,0 x 160,0	
Small cables	$\phi \leq 21$	2 x 50 or 60	1,0 x 160,0	EI 120 ²⁾
Cable bundle	$\phi_{\text{cable}} \leq 21$	2 x 50 or 60	1,0 x 160,0	
Non-sheathed cables (wires)	$\phi \leq 24$	2 x 50 or 60	1,0 x 160,0	
NYCWY 4x185/95 ¹⁾	according to	2 x 50 or 60	1,0 x 160,0	
N2XH-J 4x185 ¹⁾	according to	2 x 50 or 60	1,0 x 160,0	

¹⁾ single cable penetration seal

²⁾ valid only in case where the cable support does not pass through the penetration seal and / or in case where following cable carriers are passing through the seal:

- perforated steel tray width of max. 500 mm and thickness of 1,5 mm,
 - non-perforated steel tray width of max. 500 mm and thickness of 1,5 mm,
 - steel ladder width of max. 200 mm and thickness of 1,0 mm,
- provided that the distance between adjacent cable trays / ladders in case of cable trays / ladders placed in one row is min 100 mm.

Table B17. Resistance to fire classification of cable penetration seals in flexible or rigid wall thickness of: $t \geq 100$ mm, made with INTU FR UNICOAT P paint and single INTU FR UNIBOARD 2S:

Type of cables	Cable diameter [mm]	INTU FR UNIBOARD 2S number of layers x thickness [mm]	INTU FR UNICOAT P thickness x length L [mm]	Fire resistance class	Figure in Annex C
Small cables	$\phi \leq 21$	1 x 50 or 60	1,0 x 200,0	EI 60	Fig. C23c
Medium cables	$21 < \phi \leq 50$	1 x 50 or 60	1,0 x 200,0		
Large cables	$50 < \phi \leq 80$	1 x 50 or 60	1,0 x 200,0		
Cable bundle	$\phi_{\text{cable}} \leq 21$ $\phi_{\text{bundle}} \leq 100$	1 x 50 or 60	1,0 x 200,0		
Non-sheathed cables (wires)	$\phi \leq 24$	1 x 50 or 60	1,0 x 200,0		
Rigid plastic conduits	$\phi \leq 16$	1 x 50 or 60	1,0 x 200,0	EI 60-U/U ¹⁾ EI 60-C/U ¹⁾ EI 60-U/C ¹⁾ EI 60-C/C ¹⁾	Fig. C23a
Small cables	$\phi \leq 21$	1 x 50 or 60	1,0 x 150,0	EI 60 / E 120 ²⁾	Fig. C23b
Medium cables	$21 < \phi \leq 50$	1 x 50 or 60	1,0 x 150,0		
Large cables	$50 < \phi \leq 80$	1 x 50 or 60	1,0 x 150,0		
Cable bundle	$\phi_{\text{cable}} \leq 21$ $\phi_{\text{bundle}} \leq 100$	1 x 50 or 60	1,0 x 150,0		
Non-sheathed cables (wires)	$\phi \leq 24$	1 x 50 or 60	1,0 x 150,0		

¹⁾ valid only in case of fire acting from the INTU FR UNIBOARD 2S side

²⁾ valid only in case of fire acting from the opposite side to the INTU FR UNIBOARD 2S

Table B18. Resistance to fire classification of cable penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of INTU FR UNICOAT P paint and single INTU FR UNIBOARD 1S:

Type of cables	Cable diameter [mm]	INTU FR UNIBOARD 1S board layers x thickness [mm]	INTU FR UNICOAT P paint thickness x length [mm]	Fire resistance class
Small cables	$\varnothing \leq 21$	2 x 50 or 60	1,0 x 160,0	EI 120
Medium cables	$21 < \varnothing \leq 50$	2 x 50 or 60	1,0 x 160,0	
Large cables	$50 < \varnothing \leq 80$	2 x 50 or 60	1,0 x 160,0	
Cable bundle	$\varnothing_{\text{cable}} \leq 21$ $\varnothing_{\text{bundle}} \leq 100$	2 x 50 or 60	1,0 x 160,0	
Non-sheathed cables (wires)	$\varnothing \leq 24$	2 x 50 or 60	1,0 x 160,0	

Table B19. Resistance to fire classification of cable penetration seals in rigid floor thickness of: $t \geq 150$ mm, made with use of INTU FR UNICOAT P paint and single INTU FR UNIBOARD 2S:

Type of cables	Cable diameter [mm]	INTU FR UNIBOARD 2S board layers x thickness [mm]	INTU FR UNICOAT P paint thickness x length [mm]	Fire resistance class
Small cables	$\varnothing \leq 21$	2 x 50 or 60	1,0 x 200,0	EI 60 / E 90
Medium cables	$21 < \varnothing \leq 50$	2 x 50 or 60	1,0 x 200,0	
Large cables	$50 < \varnothing \leq 80$	2 x 50 or 60	1,0 x 200,0	
Cable bundle	$\varnothing_{\text{cable}} \leq 21$ $\varnothing_{\text{bundle}} \leq 100$	2 x 50 or 60	1,0 x 200,0	
Non-sheathed cables (wires)	$\varnothing \leq 24$	2 x 50 or 60	1,0 x 200,0	

BWR 3 Hygiene, health and the environment	
Air permeability	NPD
Water permeability	NPD
Content, emission, release of dangerous substances	NPD
BWR 4 Safety and accessibility in use	
Mechanical resistance and stability	NPD
Resistance to impact/movement	NPD
Adhesion	NPD
Durability	Z ₂
BWR 5 Protection against noise	
Aireborne sound insulation	NPD
BWR 6 Energy economy and heat retention	
Thermal properties	NPD
Water vapour permeability	NPD

8. Appropriate technical documentation or special technical documentation:

Not applicable

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name: Michał Szykowski

Position: President of the Management Board

Piaseczno, 17.07.2026

Place, date

Szykowski

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Signature

Edition 2