Materialprüfungsanstalt
Universität Stuttgart
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MPA STUTTGART Materialprüfungsanstalt Universität Stuttgart

PRÜFZEUGNIS (Test Certificate)

PZ 900 6806 026-460-var/E *)

Auftraggeber: (Client)	Akzo Nobel Hilden GmbH Düsseldorfer Straße 96-100 40721 Hilden
Betreff: Subject	Reaction to fire testing according to DIN 4102-1, "Baustoffklasse B1"
Prüfmaterial: (Test material)	Multi-layer coating system with "AQUALIT COLOR IP360" primer filler and base coat "AQUALIT COLOR T4750-20 color" on flame-retardant (DIN 4102-B1) chipboard - also veneered - as a flame-retardant building material (Baustoffklasse DIN 4102-B1)
Datum: (Date)	4th August 2026
Gültigkeitsdauer: (Period of Validity)	until 31st August 2031
Hinweis: (Notes)	The tested building-material not being used as a construction product according to German building regulations MBO § 2, Abs. 10, no „allgemeines bauaufsichtliches Prüfzeugnis" is required. This test certificate is not valid, if the tested product is utilised as construction product according to German building regulations (MBO § 17, Abs. 1). This test certificate is in no case a substitute for any required certification according to German building regulations. In cases where approvals are required by German building regulations and authorities, this test certificate may be utilised for issuing these approvals according to Bauregelliste: - Übereinstimmungsnachweise (certificate of conformity) - Verwendbarkeitsnachweise (allgemeines bauaufsichtliches Prüfzeugnis, allgemeine bauaufsichtliche Zulassung) The notes in annex D of DIN 4102-1 with reference to third-party-control are to be considered in particular.

*) This test certificate is the English version of our test certificate PZ 900 6806 026-460 dated 4th August 2026. In cases of doubt, the German version applies.

1. Material description

The multi-layer coating system with "AQUALIT COLOR IP360" primer filler and base coat "AQUALIT COLOR T4750-20 color" is applied to wood particle boards according to DIN 4102-B1, also veneered.

The primer filler must be processed with the hardener "HWA6000".

Mixing ratio (by weight):	Primer filler : hardener = 10 : 1		
Application rate (wet):	Primer filler → 1 × 200 g/m² Base coat → 1 × 120 g/m²		
Type of application:	Compressed air spraying		
Field of application:	Interior fitting		
Trade name:	Primer filler: "AQUALIT COLOR IP360" Hardener: "HWA6000" Base coat: "AQUALIT COLOR T4750-20 color"		
Receipt of samples:		10th April 2026	(Receipt-No. 26/81)
Quantity:		3 fire shaft specimen sets, coated in the color black, orange and white (1000 × 190 × 12 mm), 5 boards each	

2. Sample preparation

Twelve specimens of flame-retardant (DIN 4102-B1) chipboard, 1000 mm × 190 mm × 12 mm, were coated on one side with the coating system at the manufacturing plant in accordance with the manufacturer's instructions. The substrate boards were provided by the MPA.
For the B2 tests, 190 mm × 90 mm specimens were cut from the coated chipboard specimens.

3. Test procedure

The tests were performed according to DIN 4102-1:1998 and DIN 4102-16:2021 using the "Brandschacht" according to DIN 4102-15:1990 and the "Zulassungsgrundsätze für den Nachweis der Schwerentflammbarkeit von Baustoffen (Baustoffklasse DIN 4102-B1)", issued by Deutsches Institut für Bautechnik (DIBt), Berlin.

4. Test results

4.1 Tests according to DIN 4102-1:1998 clause 6.2, Baustoffklasse B2

Test no.		1	2	3	4	5
Colour		"black"				
Flame application		edge				
Ignition	s	0	0	0	0	0
Maximum flame height within 20 s	cm	5	3	3	4	3
reached after	s	7	15	15	10	15
Measurement mark reached	s	-	-	-	-	-
Flames extinguished after	s	15	15	15	15	15
Flames extinguished by intervention after	s	-	-	-	-	-
End of glowing	s	-	-	-	-	-
Burning droplets	s	-	-	-	-	-
Filter paper ignited	s	-	-	-	-	-
Smoke development		low				

Test no.		6	7	8	9	10
Colour		"black"				
Flame application		surface				
Ignition	s	5	4	4	5	4
Maximum flame height within 20 s	cm	4	4	4	4	4
reached after	s	15	15	15	15	15
Measurement mark reached	s	-	-	-	-	-
Flames extinguished after	s	15	15	15	15	15
Flames extinguished by intervention after	s	-	-	-	-	-
End of glowing	s	-	-	-	-	-
Burning droplets	s	-	-	-	-	-
Filter paper ignited	s	-	-	-	-	-
Smoke development		low				

Test no.		11	12	13	14	15
Colour		"orange"				
Flame application		edge				
Ignition	s	0	0	0	0	0
Maximum flame height within 20 s	cm	3	4	3	3	3
reached after	s	15	15	15	15	15
Measurement mark reached	s	-	-	-	-	-
Flames extinguished after	s	15	15	15	15	15
Flames extinguished by intervention after	s	-	-	-	-	-
End of glowing	s	-	-	-	-	-
Burning droplets	s	-	-	-	-	-
Filter paper ignited	s	-	-	-	-	-
Smoke development		low				

4.2. Test according to DIN 4102-1:1998, clause 6.1 – "Baustoffklasse B1"

Fire shaft test A: on black material
Fire shaft test B: on orange material
Fire shaft test C: on white material
The fire shaft tests were carried out on free-hanging specimens without any substrates.

4.2.1 Results of the fire shaft tests ("Brandschacht") (part 1)

Line-No			Test A	Test B	Test C
1	No. of specimen arrangement according to DIN 4102-15, table 1		7	7	7
2	Max. flame height above the lower edge of the sample	cm	100	90	90
3	Time of appearance [1]	min/s	1:20	1:25	1:45
4	Melting through/burning through Time of appearance [1]	min/s	-	-	-
5	Observations on reverse face of specimen flames/glowing Time of appearance [1]	min/s	-	-	-
6	discoloration Time of appearance [1]	min/s	-	-	-
7	Burning droplets Beginning [1]	min/s	-	-	-
	Continued burning on sieve tray	s	-	-	-
8	Occasional dripping specimen material		-	-	-
9	Continuous dripping specimen material		-	-	-
10	Burning falling specimen parts Beginning [1]	min/s	-	-	-
11	Occasional falling specimen parts		-	-	-
12	Continuous falling specimen parts		-	-	-
13	Duration of continued burning on the sieve tray (max.)	min/s	-	-	-
14	Impairment of the burner flame by dripping/falling material Time of appearance [1]	min/s	-	-	-
	Premature end of experiment				
15	End of burning on specimens [1]	min/s	-	-	-
16	Time of test termination, if applicable	min/s	-	-	-

1) Times measured from the start of the test.

4.2.2 Results of the fire shaft tests (Brandschachtprüfung) (part 2)

Line-No			Test A	Test B	Test C
	Afterburning after the end of the test				
17	Duration	min/s	-	-	-
18	Number of specimens				
19	On front face of the specimen				
20	On reverse face of the specimen				
21	Flame length	cm	-	-	-
	Afterglow after end of test				
22	Duration	min/s	-	-	-
23	Number of specimens				
	Location of occurrence:				
24	lower half of specimen				
25	upper half of specimen				
26	On front face of the specimen				
27	On reverse face of the specimen				
	Smoke density				
28	≤ 400 % x min		12	9	12
29	≥ 400 % x min				
	(very heavy smoke development)		-	-	-
30	Diagram in annex no.		1	2	3
	Residual lengths				
31	Individual values	cm	16 / 19 17 / 16	17 / 19 19 / 19	19 / 18 20 / 19
32	Mean values of specimens	cm	17 *)	19 *)	19 *)
33	Photo of specimen in annex no.		4	5	6
	Flue gas temperature				
34	Maximum of mean value	°C	151	143	143
35	Time of appearance	min/s	5:21	6:17	5:48
36	Diagram in annex no.		1	2	3
37	*Residual length of carrier boards was 17 cm				

According to DIN 4102-16:2021 clause 6.2, the scope of testing could be reduced.

5. Classification

All samples passed the fire shaft test according to DIN 4102-1:1998, clause 6.1.2.2 and the test according to DIN 4102-1:1998, clause 6.2 for Baustoffklasse B2.

Therefore, the product described in section 1 the requirements for flame-retardant building materials of Baustoffklasse B1 according to DIN 4102-1:1998.

No specimen parts fell off burning or glowing during the test according to DIN 4102-1:1998, clause 6.2.5, and DIN 4102-16:2021.

According to DIN 4102-16:2021, the building material is considered not to produce burning droplets.

6. Notes

6.1 The containers of the coating system must be labelled according to DIN 4102-1:1998, clause 7 with the following marking:

„DIN 4102 – B1,

aufgebracht auf schwerentflammbaren (DIN 4102-B1) Holzspanplatten“

6.2 The assessment in section 5 applies only to the coating system described in section 1 and tested as described in section 3, applied to “schwerentflammbar” (DIN 4102-B1) chipboard – also veneered.
When used in combination with other building materials, in particular other substrates, its fire behaviour may be adversely affected to such an extent that the assessment in section 5 is no longer valid.

The reaction-to-fire in combination with other building materials/substrates must be demonstrated separately.

6.3 For external applications, it must be demonstrated in accordance with DIN 4102-16:2021 that the requirements for building materials of Baustoffklasse B1 (“schwerentflammbar”) are also fulfilled after 2 and 5 years of outdoor weathering. This verification has not (yet) been provided.

6.4 The validity of the assessment in section 5 of this test certificate ends on 31st August 2031.
The period of validity may be extended upon application.
Verification testing is necessary for this purpose.

6.5 This test certificate does not replace an „allgemeines bauaufsichtliches Prüfzeugnis (abP)” or an "allgemeine bauaufsichtliche Zulassung (abZ)" that may be required.

Abteilung Brandschutz
Referat Brandverhalten von Baustoffen

UNIVERSITÄT STUTTGART MATERIALPRÜFUNGSANSTALT (MPA)

The engineer in charge

Dr. Sebastian B. Wachsmann

Dept. head of testing institute

Dipl.-Ing. (FH) Frank Waibel

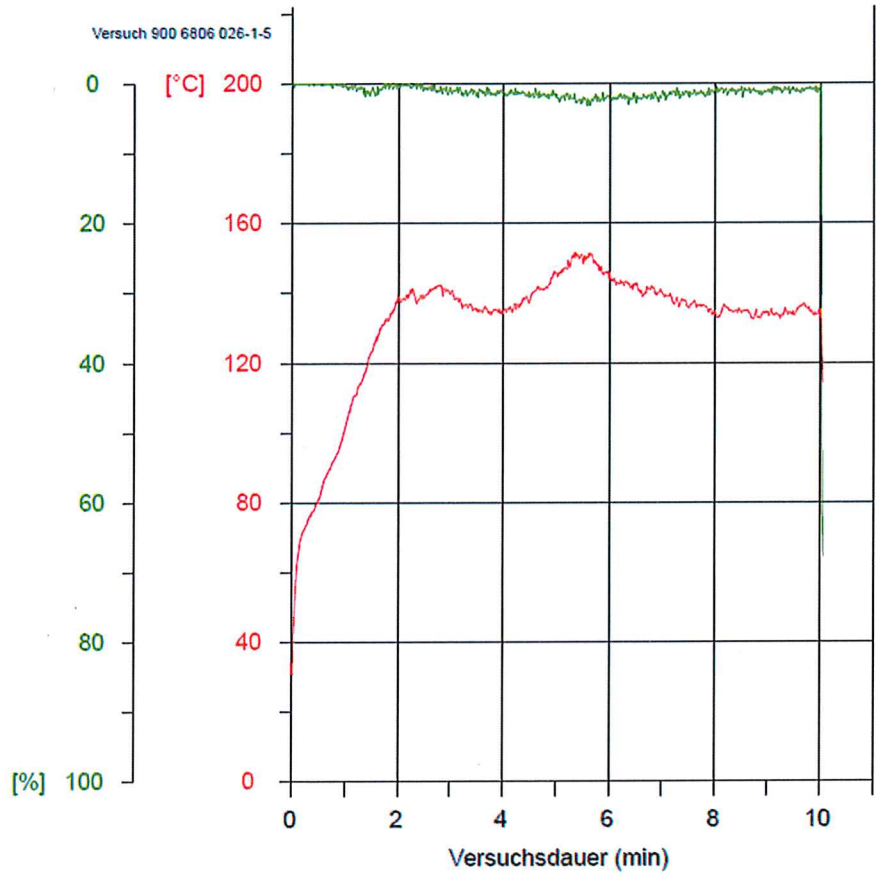

Abb. 1 Verlauf des Brandschachtversuchs A

max. Rauchgastemp.	151 °C
erreicht nach	5:21 min:sec
max. Rauchdichte	3 %
Integralwert	12 %*min

Figure 1: Results of fire shaft test A (“Brandschachtversuch”), (smoke density, flue gas temperature)

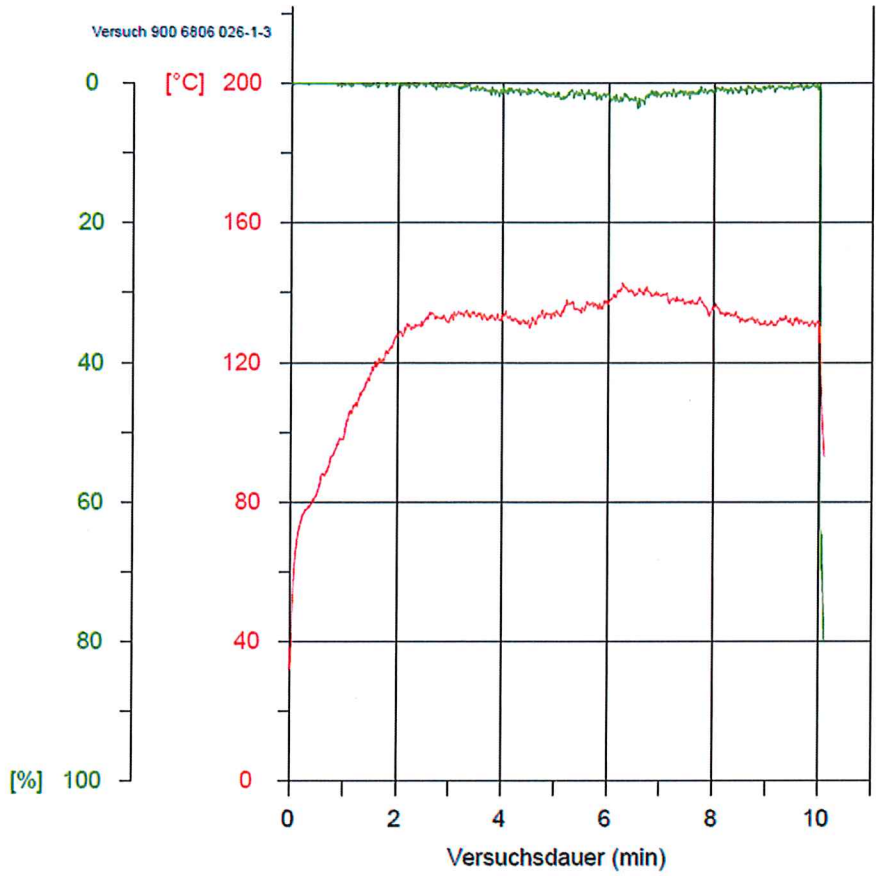

Abb. 2 Verlauf des Brandschachtversuchs B

max. Rauchgastemp.	143 °C
erreicht nach	6:17 min:sec
max. Rauchdichte	4 %
Integralwert	9 %*min

Figure 2: Results of fire shaft test B (“Brandschachtversuch”), (smoke density, flue gas temperature)

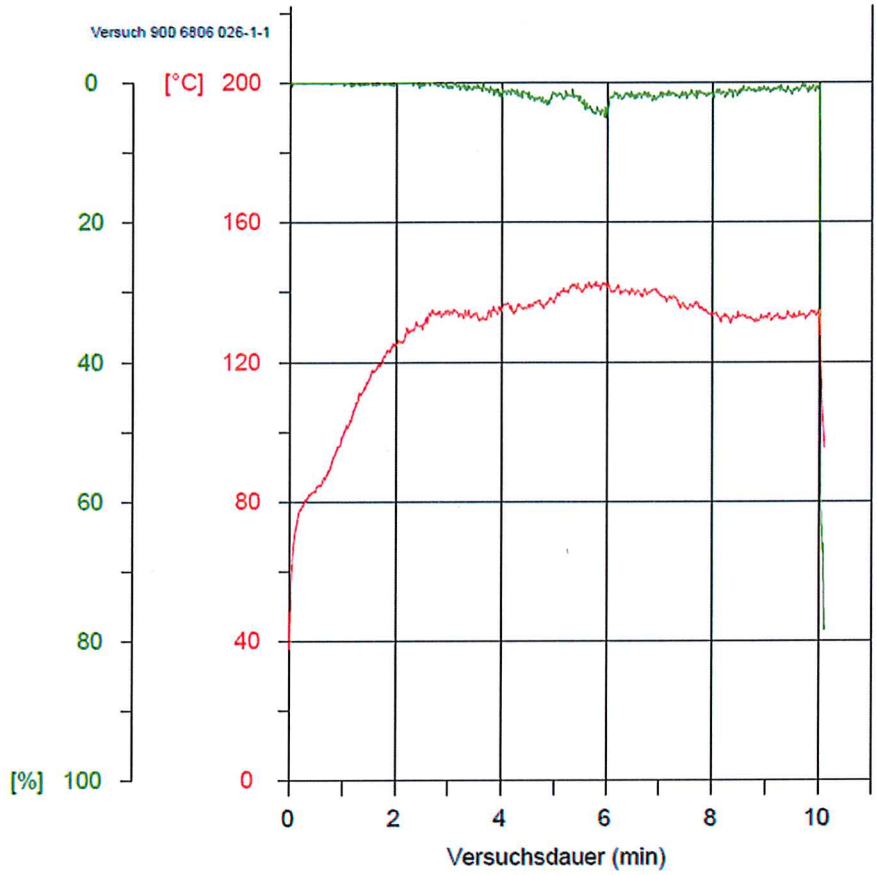

Abb. 3 Verlauf des Brandschachtversuchs C

max. Rauchgastemp.	143 °C
erreicht nach	5:48 min:sec
max. Rauchdichte	5 %
Integralwert	12 %*min

Figure 3: Results of fire shaft test C (“Brandschachtversuch”), (smoke density, flue gas temperature)

Fig. 4: Illustration of the specimens of Brandschacht test 1.

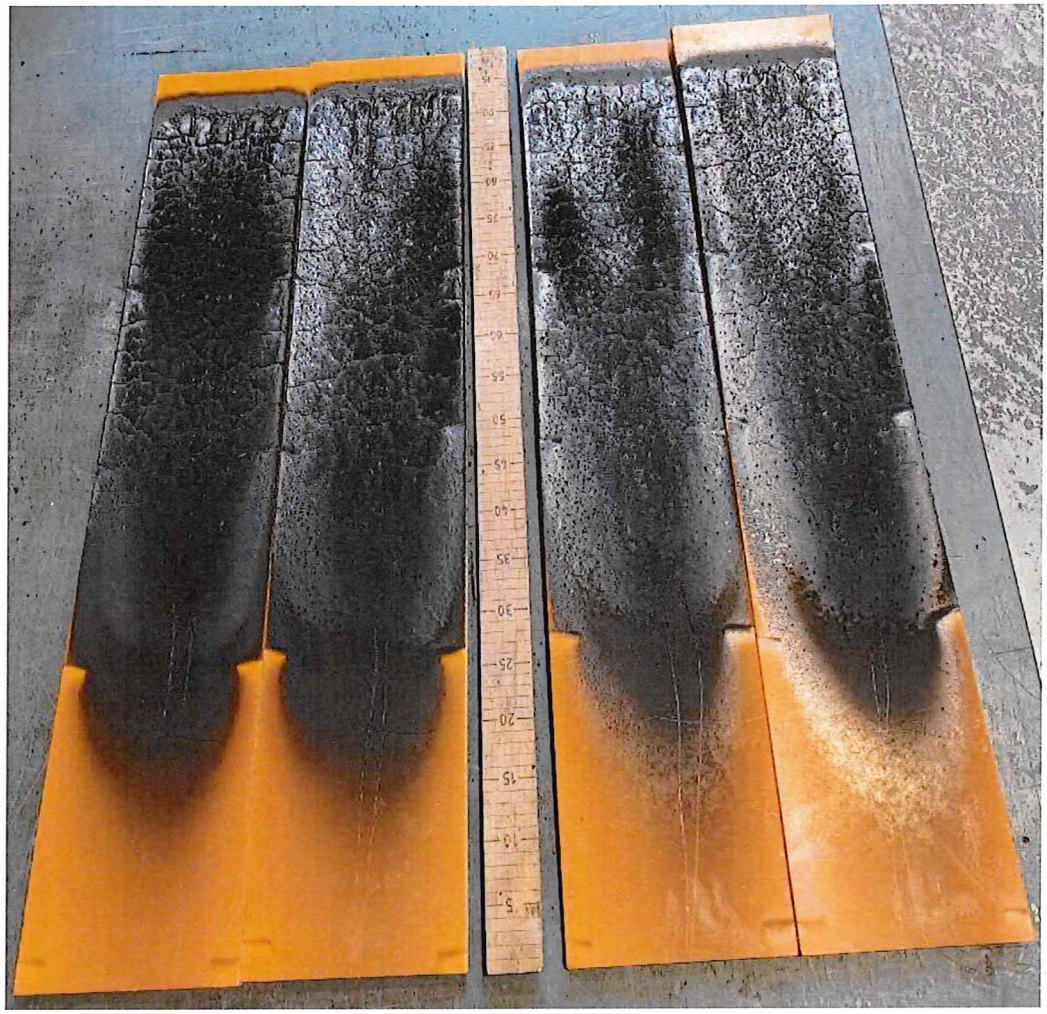

Fig. 5: Illustration of the specimens of Brandschacht test 2.

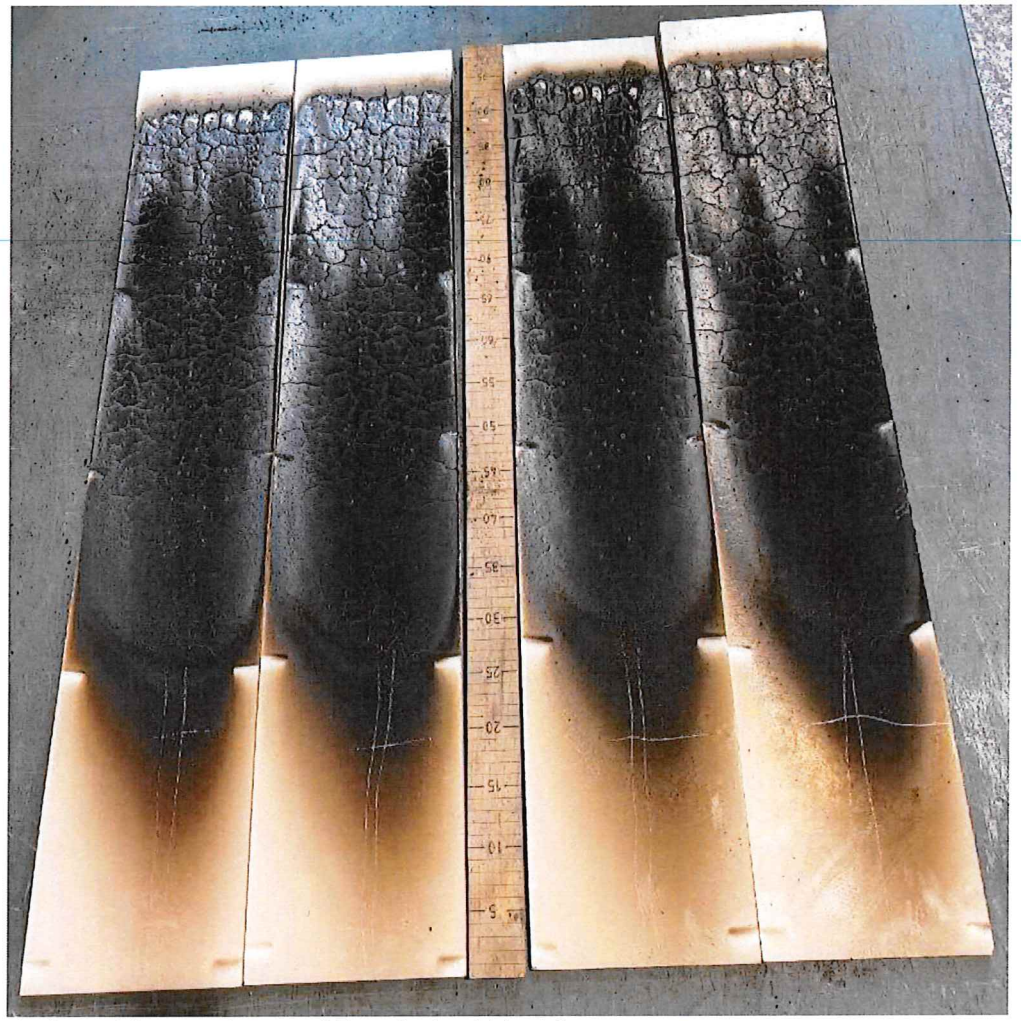

Fig. 6: Illustration of the specimens of Brandschacht test 3.

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