

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-16/0126
of 13 September 2016

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

"BarraFlame DMA"

Product family
to which the construction product belongs

Intumescent Product used for penetration seals

Manufacturer

BASF Personal Care and Nutrition GmbH
Robert-Hansen-Straße 1
89257 Illertissen
DEUTSCHLAND

Manufacturing plant

BASF Personal Care and Nutrition GmbH
Robert-Hansen-Straße 1
89257 Illertissen
DEUTSCHLAND

This European Technical Assessment
contains

9 pages including 5 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

Guideline for European technical approval of "Fire
Stopping and Fire Sealing Products", ETAG 026 Part 2:
"Penetration Seals",
used as European Assessment Document (EAD)
according to Article 66 Paragraph 3 of Regulation (EU)
No 305/2011.

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Specific Part

1 Technical description of the product

The construction product "BarraFlame DMA" is an intumescent material. It is supplied as a liquid coating of white colour in pails or drums. When exposed to fire it expands and creates foam which seals gaps, joints and holes and therefore prevents the passage of heat, flame and/or smoke.

Detailed technical specifications and performance criteria relevant for fire safety with regard to the construction products are given in Annex 1.

NOTE:

The characteristics listed can serve both for identifying the construction products as well as for performing the manufacturer's factory production control.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The construction product "BarraFlame DMA" is intended to be used as a component with a fire protection effect in penetration seals.

Penetration seals are parts of the works which prevent heat transmission and fire spreading in the event of fire in areas where fire resistant walls and/or floors are penetrated by services.

Within the scope of this ETA, the fire resistance was demonstrated for mixed and blank penetration seals¹ which consisted of the components listed in Annex 2. The construction product "BarraFlame DMA" was used in this penetration seals for the coating of mineral fiber boards which are installed within openings penetrated by cables and pipes, for the coating of a circumferential stripe on the surface of the wall or floor and of cables and cable supports.

Detailed information and data on the verified penetration seals are given in Annexes 1 to 5. The performances given in Section 3 exclusively relate to this penetration seals (e.g. with respect to the design and arrangement of the components of the penetration seals and the type and position of the services).

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of at least 10 years for "BarraFlame DMA" when used under use conditions Z_1 or Z_2 according to EOTA TR 024. The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer, but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

¹ Mixed penetration seals are used to seal off openings penetrated by both cables and pipes. Blank penetration seals serve to demonstrate the preservation of the fire resistance in case of a low number of services passing through the opening.

3 Performance of the product and references to the methods used for its assessment

Safety in case of fire (BWR 2)

Essential characteristic	Performance
Fire resistance of a penetration seal incorporating the product	The fire resistance depends on the construction/installation of the penetration seal and on the other components incorporated in the penetration seal. Details on the verified penetration seals and the related fire resistance classes are given in Annexes 1 to 5.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with the Guideline for European technical approval "Fire Stopping and Fire Sealing Products", ETAG 026, Part 2: "Penetration Seals", January 2008, which is used as European Assessment Document (EAD), the following legal base shall apply: 1999/454/EC.

The system to be applied is: system 1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 13. September 2016 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

beglaubigt:
Meske-Dallal

Properties and criteria for the performance of the construction product "BarraFlame DMA"

	Properties	Test method	Parameter
1	Apparent density ("liquid") [kg/m ³]	EN ISO 2811-1	1300 ± 70
2	Nonvolatile components [%]	EN ISO 3251	61,0 to 71,0
3	Weight loss due heating [%]	EN ISO 3451-1; EOTA TR 024:2009 at 400°C	54,0 to 64,0
4	viscosity ("liquid") [mPa s]	EN 12092	30.000 to 50.000
5	Foam height [mm]	EOTA TR 024:2009	90 to 125 Without any top load at 400 °C

The properties listed can be used both for identifying the construction products as well as for the implementation of the factory production control by the manufacturer.

Implementation details for the factory production control are included in the test plan.

Performance of penetration seals "BarraFlame Mixed Penetration Seal 90/120" comprising the construction product "BarraFlame DMA"

	Essential requirement	Test method	Design of the test specimen	Performance
1	Resistance to fire	EN 1366-3	100 mm thick flexible wall; design and layout of the penetration seal according to Annexes 3 and 4*	EI 90
2	Resistance to fire	EN 1366-3	100 mm thick flexible wall; blank penetration seal (design analogue 1 but without services)	EI 90
3	Resistance to fire	EN 1366-3	150 mm thick aerated concrete floor; design and layout of the penetration seal according to Annexes 3 and 5*	EI 90
4	Resistance to fire	EN 1366-3	150 mm thick aerated concrete floor; blank penetration seal (design analogue 3 but without services)	EI 90

* Illustration without guarantee for completeness.

The use of the construction product "BarraFlame DMA" within penetration seals of the type "BarraFlame Mixed Penetration Seal 90/120" shall be in accordance with national requirements and in accordance with the installation instruction of the manufacturer. The tested/illustrated seals are only examples for the use.

"BarraFlame DMA"

Description of the construction products, properties and performance
Properties of the construction product "BarraFlame DMA" and performance of penetration seals "BarraFlame Mixed Penetration Seal 90/120" comprising "BarraFlame DMA"

Annex 1

Description of additional components of the tested penetration seals

Designation / Manufacturer	Description
<p>"BarraFlame DMK" BASF Personal Care und Nutrition GmbH 892578 Illertissen Deutschland</p>	<p>Intumescent material, putty like according to ETA-16/0127</p>
<p>"Hardrock 040" ("Hardrock II") Deutsche Rockwool Mineralwoll GmbH 45966 Gladbeck Deutschland</p>	<p>Mineral fiber board according to DIN EN 13162 Thickness: 60 mm Nominal density: 150 kg/m³ Reaction to fire class according to DIN EN 13501-1: class A1</p>
<p>"FPB D150" Knauf Insulation d.o.o. Skofja Loka Slovenien</p>	<p>Mineral fiber board according to DIN EN 13162 Thickness: 60 mm Nominal density: 150 kg/m³ Reaction to fire class according to DIN EN 13501-1: class A1</p>
<p>"KBS Pipe Seal SN" BASF Personal Care und Nutrition GmbH 892578 Illertissen Deutschland</p>	<p>Pipe collar with steel housing and intumescent material according to ETA-16/0214</p>
<p>"Rohrschale 800" ("Lapinus Rohrschale") Deutsche Rockwool Mineralwoll GmbH 45966 Gladbeck Deutschland</p>	<p>Mineral fiber pipe section according to DIN EN 14303 Thickness: 30 mm Nominal density: 100 kg/m³ Reaction to fire class according to DIN EN 13501-1: class A1</p>

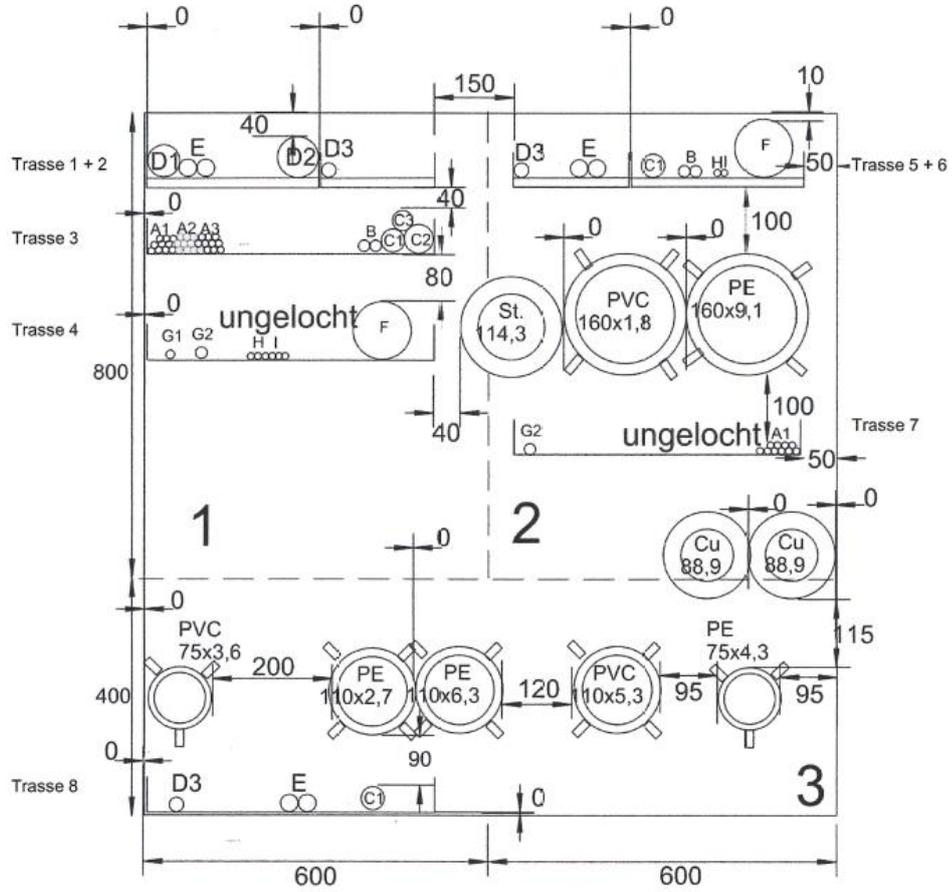
"BarraFlame DMA"

Description of the construction products, properties and performance
Properties of additional components of penetration seals "BarraFlame Mixed Penetration
Seal 90/120"

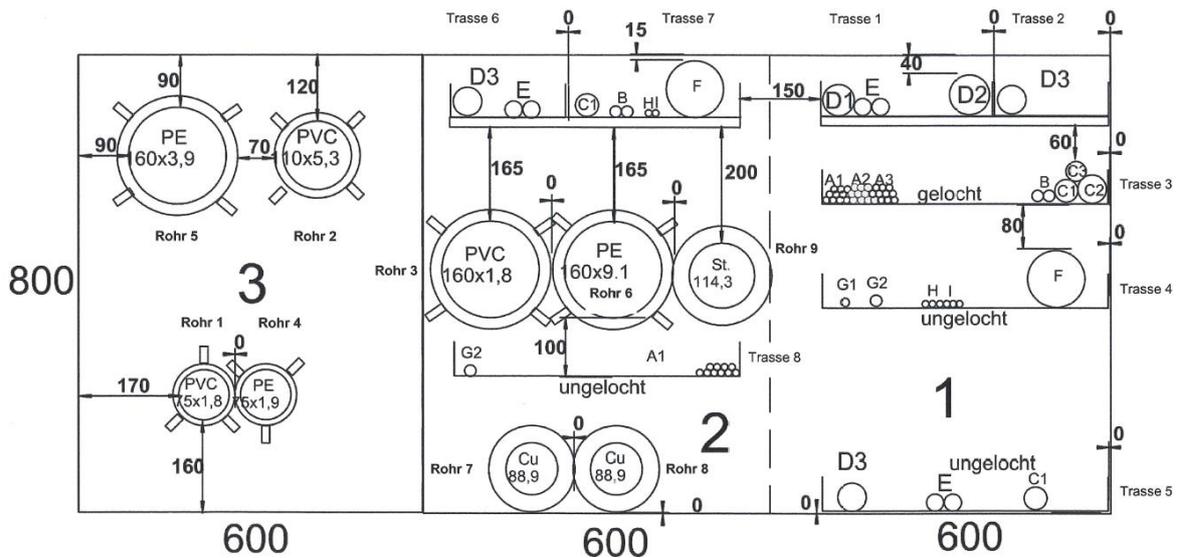
Annex 2

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Layout of the test specimen for wall installation



Layout of the test specimen for floor installation



dimensions in mm

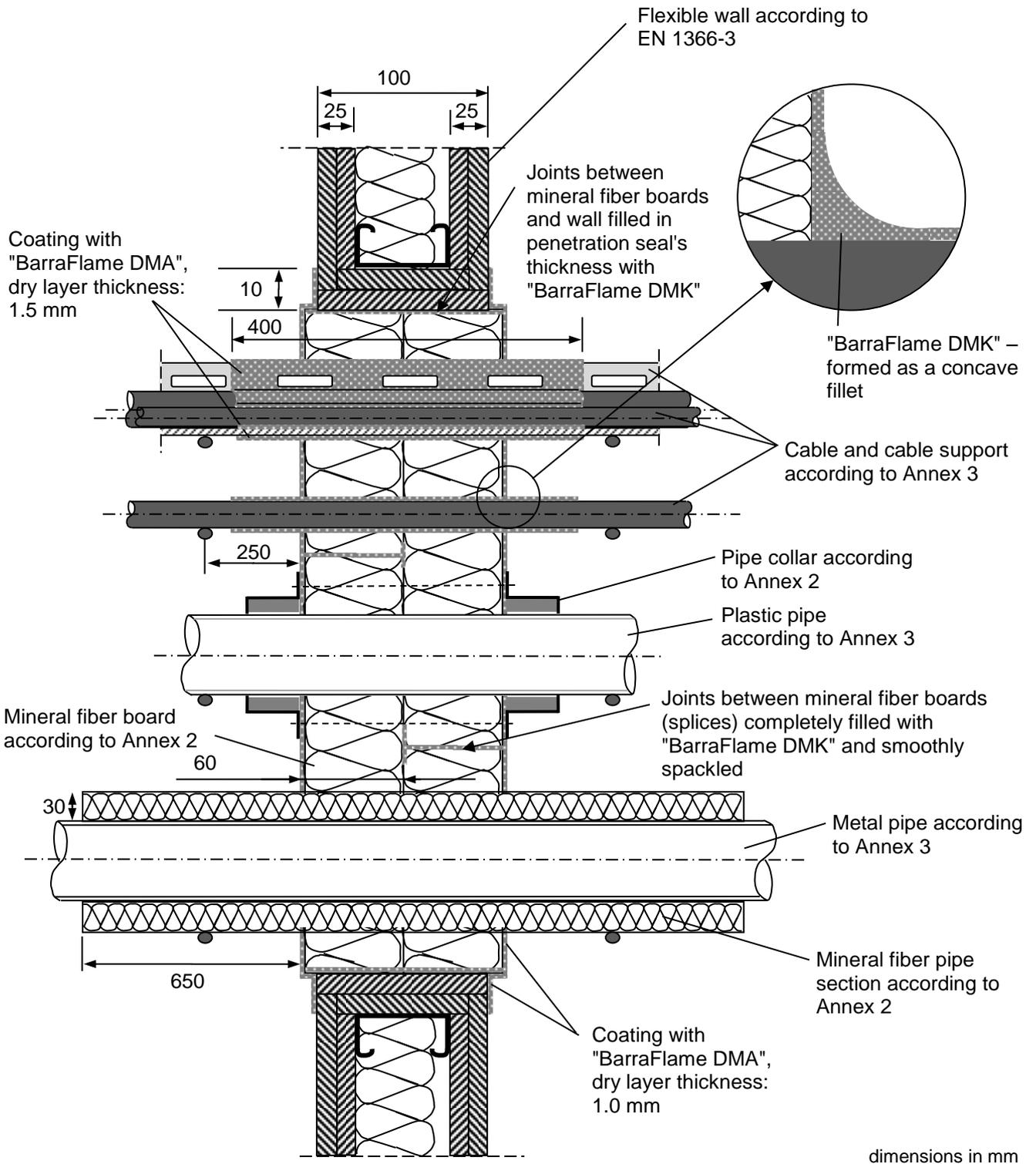
"BarraFlame DMA"

Use as part of a mixed penetration seal with a resistance to fire class **EI 90**
Layout of the test specimens in wall and floor – front view

Annex 3

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Wall installation of the penetration seal - section:



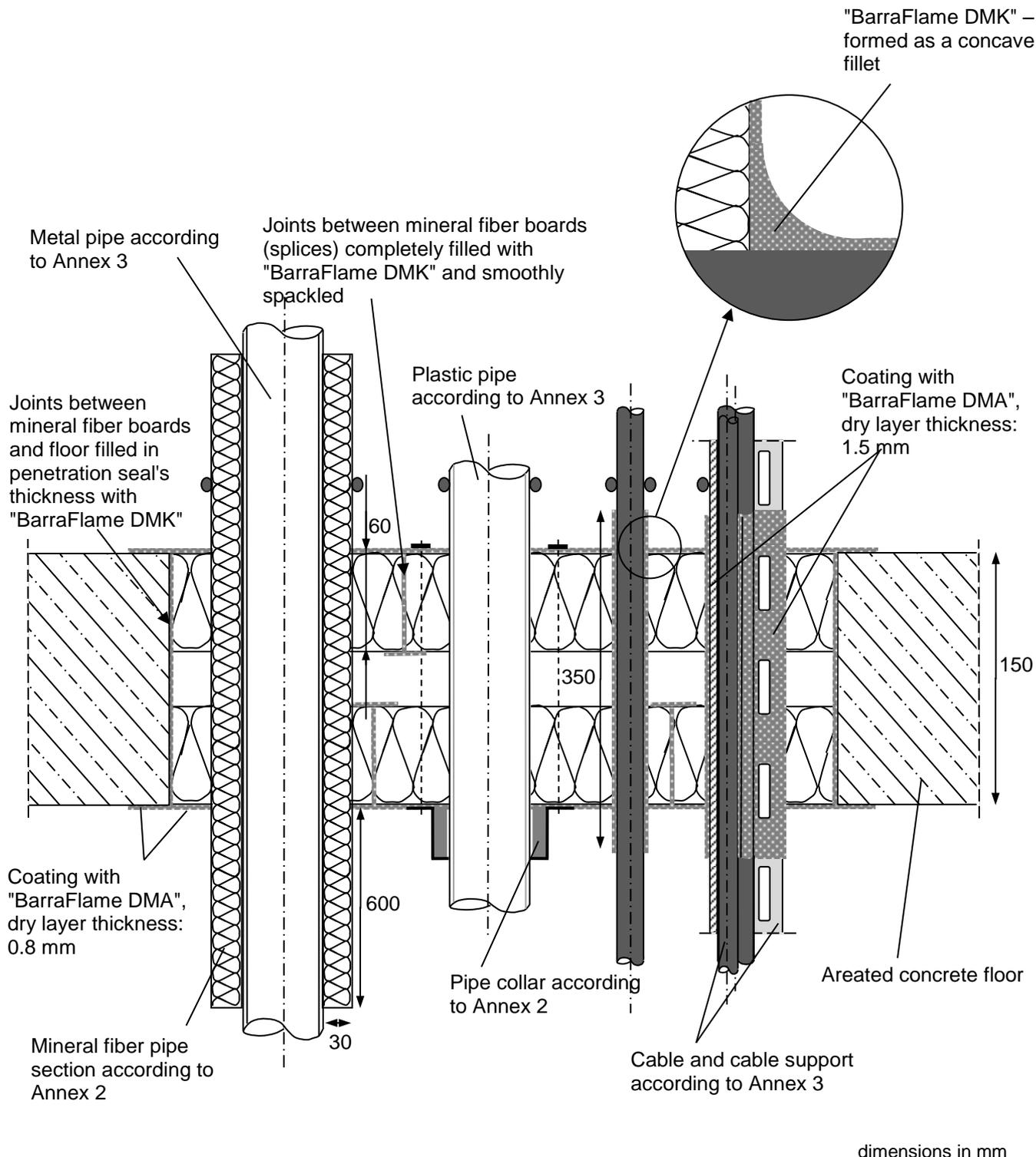
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"BarraFlame DMA"

Use as part of a mixed penetration seal with a resistance to fire class **EI 90**
Wall installation – section

Annex 4

Floor installation of the penetration seal - section:



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"BarraFlame DMA"

Use as part of a mixed penetration seal with a resistance to fire class **EI 90**
Floor installation – section

Annex 5