

**Certificate**  
**No. MPA-BS 6000/079-2/15****Product**

Components of penetration seals for cables and/or pipes to be used to temporarily or permanently shut apertures in flexible and rigid walls and rigid floors/ceilings as well as in shaft constructions in order to reinstate the fire-resistance of the wall or the ceiling where they are penetrated.

**Supplier**

Zapp-Zimmermann GmbH  
Marconistr. 7 - 9  
D-50769 Köln  
Germany

**Tests of resistance to fire**

The penetration seals were tested on the basis of EN 1366-3 and EN 1363-1 while being installed in various types of walls, ceilings and/or floors in apertures for cable trays, cables, cable-bundles and/or pipes. Performance parameters were heat and smoke leakage or integrity as well as thermal insulation for test period of  $\geq 90$  min or  $\geq 120$  min.

Note: Details on the penetration seal are given in the annex to this certificate.

**Certification procedure**

The product has been assessed against the requirements of the MPA General Requirements for Certification of Fire Protection Products on the basis of test reports and detailed expert opinions; reference was made to ISO/IEC 17067 type 5.

MPA Braunschweig runs accredited test laboratories according to ISO/IEC 17025 and an accredited certification body which meets the requirements of ISO/IEC 17065.

**Validity**

This certificate consists of two pages. It shall be valid until the 30-06-2017 as a maximum, provided that the product is not subject to changes.

Braunschweig, 01-07-2015

  
Dr.-Ing. Hinrichs  
Head of Certification



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Notified body (0761-CPR)  
MPA Braunschweig is accredited against ISO/IEC 17025  
(testing and calibration), ISO/IEC 17020 (inspection) and  
ISO/IEC 17065 (certification).

## SPECIFICATION OF THE PRODUCT

The product consists of four specific elements with the following trade names:

- Fire Protection Block ZZ 230
- Fire Protection Plug ZZ 130
- Fire Protection Foam ZZ 330
- Fire Protection Sealant ZZ 333

## APPLICATION GUIDANCE ON THE INSTALLATION OF THE PRODUCT

### Installation

The installation of the penetration seal must be performed in accordance with the installation provisions of the manufacturer.

The minimal allowed thickness of the penetration seal is 100 mm. When applied the minimum allowed thicknesses of the construction elements with the openings to be shut are

- 100 mm in rigid walls made of masonry, concrete, armed concrete or porous concrete with minimum dimensions of 1,000 mm x 1,000 mm
- 80 mm in fire-resistant non-load bearing wall constructions with the minimum dimensions of the elements of 840 mm x 570 mm
- 42 mm in fire-resistant non-load bearing shaft-wall constructions with minimum dimensions of the elements of 584 mm x 584 mm
- 150 mm in ceilings made of concrete, armed concrete or porous concrete with minimum width of 700 mm.

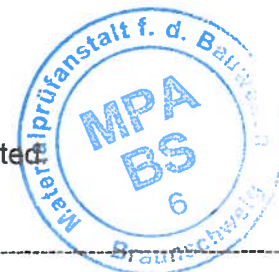
The cable trays, cables, cable-bundles and pipes that are shut with the penetration seal are partly specified as regard their material, their use, the dimensions, insulation etc. It must be checked before the installation whether the chosen construction has been tested appropriately.

## MANUFACTURER'S MANUAL

The penetration seal must be used in accordance with the provisions in the manufacturer's manual.

## PERSONNEL

Prior to assembly and installation the personnel must be instructed.



----- End of the certificate -----