

Fire Protection Sealant ZZ 333

Technical data sheet

Trade name:	Fire protection mastic ZZ 333 ZZ-Mastic NE
Description:	Water-based polyacrylic system stored in a cartridge, with halogen-free intumescent fire retardants.
Implementation areas:	Cable penetration seal for rigid walls, rigid floors and flexible walls. Through penetration firestop system for electrical cables, telecommunication cables, and optical fibre cables. Through penetration firestop of installations in accordance with MLAR. Sealing compound for closing joints and interstices in ZZ through penetration firestop systems made of moulded parts.
Approvals / certificates:	<ul style="list-style-type: none">• European Technical Approval ETA-13/0093, OIB• EC Conformity Certificate 0761-CPD-0300 (0761-CPD-0187, 0761-CPD-0266)• General type approval Z-19.11-1600, DIBt• MLAR expert report (11352/2016)• Fire protection application no. 24899 (cables), VKF• System component in ETA-10/0431, ETA-12/0088, Z-19.15-1743, Z-19.15-1744, Z-19.15-1642, Z-19.17-1659, Z-19.15-1318, Z-19.15-1316, Z-19.15-1315, Z-19.15-1182, Z-19.15-1861, Z-19.15-2158
Colour:	Red-brown
Content:	310 ml
Transport / storage:	Dry and only in the original packaging
Storage temperature:	5 °C to 30 °C
Storage stability:	12 months at 23 °C/ 50 % rel. humidity, See imprint on cartridge for expiry date
Application temperature:	10 °C to 30 °C, recommended: 20 °C to 25 °C
Skin-forming time:	Approx. 10 minutes at 23 °C and 50 % rel. humidity
Viscosity:	Pasty, non-sag at 23 °C
Bulk density:	$\rho = 1300 \text{ kg/m}^3$ to 1450 kg/m^3
Safety notices:	Please observe the safety data sheet.

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Behaviour in the event of fire:

Material class	DIN 4102-B1 (on solid mineral building materials, minimum thickness 20 mm and between solid mineral building materials (bulk density > 1500 kg/m ³) in a thickness up to 20 mm and a width up to 40 mm)
Classification of the fire protection behaviour in accordance with DIN EN 13501-1:	Class E
Expansion pressure:	No expansion pressure measurable
Foaming factor:	7.6x to 13.6x Tested on samples at 450°C for more than 25 minutes with superimposed load. The foaming factor is a laboratory characteristic value. The foaming behaviour in installed status depends on the existing boundary conditions.

Physical construction material / product characteristics

The following specifications do not represent guaranteed product characteristics. They must, therefore, be regarded exclusively as information intended to serve as guideline values.

Air permeability:	No air passage measurable up to Δ 600 Pa Test standard: EN 1026 (test specimen dimensions 100 x 100 [mm], 2 x 15 mm fill on both sides, tested without penetrating elements)
Resistance to static differential pressure:	$P_{\max} = 9800$ Pa Test standard: In accordance with EN 12211 (test specimen dimensions 100 x 100 [mm], 2 x 15 mm fill on both sides, tested without penetrating elements)
Surface resistance:	$R_0 = 2$ bis $4 \times 10^6 \Omega$ Test standards: DIN IEC 60167, BGR 132:2003 (2.6) satisfies TRGS 727:2016

Approved in potentially explosive zones:

	0	1	2	20	21	22
earthed	✓	✓	✓	✓	✓	✓
unearthed	✗	✗	✗	✗	✗	✗

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Hygiene, health and environmental protection

Indoor air hygiene

Requirements of AgBB Scheme 2015 are fulfilled
 Test standards: prEN 16516, ISO 16000-3, ISO 16000-6,
 ISO 16000-9

Test lab: eco-INSTITUT Germany GmbH, Cologne
 Date: 23/08/2017

	Result	Requirement	Requirements fulfilled
Emission rating			
Measurement after 3 days			
TVOC (C6 – C16)	0.052 mg/m ³	≤ 10 mg/m ³	✓
Carcinogens (EU Cat. 1A and 1B)	< 0.001 mg/m ³	≤ 0.01 mg/m ³	✓
Measurement after 28 days			
TVOC (C6 – C16)	0.017 mg/m ³	≤ 1 mg/m ³	✓
Σ SVOC (C16-C22)	< 0.005 mg/m ³	≤ 0.1 mg/m ³	✓
R (dimensionless)	0.06	≤ 1	✓
VOC without NIK	< 0.005 mg/m ³	≤ 0.1 mg/m ³	✓
Carcinogens	< 0.001 mg/m ³	≤ 0.001 mg/m ³	✓

VOC emission class

A+ in accordance with French decree no. 2011-321
 Test standards: ISO 16000-3, ISO 16000-6, ISO 16000-9,
 ISO 16000-11, ISO 16017-1

Microbial metabolic potential:

Inert / fungistatic / bacteriostatic
 Test standard: DIN EN ISO 846

Testing the fire protection properties under environmental influences

Tests were performed in accordance with the approval principles for materials that form an insulating layer, dated 11/24/2006 of the DIBt, and EOTA Guideline for European Technical Approval, ETAG no. 026-2, dated 01/01/2008.

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Thermal stress:

Continuous contact or ambient temperature: $\leq 60\text{ °C}$

Permissible ambient conditions:

In accordance with ETAG 026-2: Use category Z₁
Fire-retardant sealing products for use in indoor areas with all moisture levels at temperatures $\geq 0\text{ °C}$.

Occasional, brief spray water stress does not pose a problem. Overall, continuous wet conditions as well as standing water and pressing water must be avoided.

Influence of coating materials and chemicals:

The following paints and occasional, brief influence of chemicals do not cause any change in the technical fire protection properties:

Coating materials: Dispersion paint, alkyd resin paint, polyurethane acrylic lacquer, epoxy resin lacquer

Solvent/oil: Trichloroethylene, xylene, acetone, white spirit, butyl acetate, butanol, domestic fuel oil

Gaseous chemicals: Brief storage over concentrated ammonia solution

Comment: Environmental conditions with high humidity levels and/or some coating materials and chemicals can cause minor lightening of the colour.

Contact with metals and plastics:

The surface consistency of aluminium, stainless steel, galvanised steel and plastics made of polyethylene and polyvinyl chloride is not affected in a negative way upon contact with Fire Protection Sealant ZZ 333.

All the information in this leaflet is based on current technical knowledge and experience. Details on processing and application must be checked on a project-by-project basis due to the variety of possible influences. If the application for which our products are used is subject to a government agency approval obligation, then the user is responsible for obtaining this approval. We would be pleased to respond to any enquires you might have. The information in this document and declarations of ZAPP-ZIMMERMANN GmbH in conjunction with this document do not constitute any assumption of a guarantee. Guarantee declarations require the separate, express written declaration of ZAPP-ZIMMERMANN GmbH. The conditions specified in this data sheet represent the characteristics of the delivery object, they do not represent any specific values. Specific values must be separately determined on a case-by-case basis. We reserve the right to adapt the product to technical progress and to new developments. In all other aspects we refer to our general terms and conditions.