

**ZZ® 681 Air Transfer Grill****Technical data sheet**

<b>Trade name:</b>	<b>ZZ® 681 Air Transfer Grille</b>
<b>Description:</b>	Square ventilation module of hard intumescent polyurethane foam with halogen-free flame retardants; does not exhibit any appreciable expansion pressure.
<b>Implementation areas:</b>	Maintenance-free opening seal for square air vent openings in control cabinets, machine rooms, doors, and ducts for air circulation and heat dissipation.
<b>Certificates:</b>	<ul style="list-style-type: none"><li>• Classification report no. 18/1282, Currenta</li></ul>
<b>Requirement set:</b>	R22, R23 according to EN 45545-2
<b>Hazard level:</b>	HL1, HL2, HL3
<b>Colour:</b>	Red-brown
<b>Content / dimensions:</b>	Air Transfer Grille, 93 x 93 x 20 [mm] Air Transfer Grille, 93 x 186 x 20 [mm] Air Transfer Grille, 150 x 150 x 20 [mm] Air Transfer Grille, 150 x 200 x 20 [mm] Air Transfer Grille, 150 x 300 x 20 [mm]
<b>Transport / storage:</b>	Dry and only in the original packaging
<b>Storage temperature:</b>	5 °C to 30 °C
<b>Bulk density:</b>	$\rho \geq 1150 \text{ kg/m}^3$ to $1410 \text{ kg/m}^3$
<b>Safety notices:</b>	Please observe the safety data sheet.

**Behaviour in the event of fire**

<b>Expansion pressure:</b>	0.45 N/mm <sup>2</sup> to 1.10 N/mm <sup>2</sup> Tested on samples up to 350 °C
<b>Foaming factor:</b>	5.0x to 12.0x 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.

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**Smoke generation according to EN ISO 5659-2:**  $D_s \text{ max (-)} = 115$

**Burning behaviour (Oxygen index) according to ISO 4589-2:**  $OI \geq 32 \%$

**Conventional index of Toxicity according to NF X 70-100-1/-2:**  $CIT_{NLP} = 0,25$

**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.

**Surface resistance:**  $R_0 = \gg 10^{12} \Omega$   
Test standards: DIN IEC 60167,  
BGR 132:2003 (2.6) satisfies TRGS 727:2016

**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 24/11/2006 of the DIBt, and EOTA Guideline for European Technical Approval, ETAG no. 026-2, dated 01/01/2008.

**Thermal stress:**

Continuous contact or ambient temperature:  $\leq 80^\circ\text{C}$

**Permissible ambient conditions:**

In accordance with ETAG 026-2: Use category  $Z_1$   
Fire-retardant sealing products for use in indoor areas with all moisture levels at temperatures  $\geq 0^\circ\text{C}$ .

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.

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 Karl Zimmermann GmbH in conjunction with this document do not constitute any assumption of a guarantee. Guarantee declarations require the separate, express written declaration of Karl 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.