

## General test certificate

### No. 20180592/02

First official copy

**Customer:** Rittal GmbH & Co. KG  
Auf dem Stützelberg  
D-35745 Herborn

**Product designation:** "Grundschutzraum Plus"

**Manufacturer:** Rittal GmbH & Co. KG  
Auf dem Stützelberg  
D-35745 Herborn

**Brief description:** The "Grundschutzraum Plus" (GSR Plus) is a self-supporting and free-standing spatial structure constructed from industrially prefabricated, modular wall and ceiling elements.

**Remit:** Evaluation of the fire protection characteristics of the "Grundschutzraum Plus" manufactured by Rittal GmbH & Co. KG based on the submitted test and product documents with reference to European test and classification standards (i.e. DIN EN 1363-1 and DIN EN 13501-2).

This general test certificate comprises 4 pages of text and 0 appendices.

In case of doubt the German version of general test certificate no. 20180592/02 is valid.



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## 1. Basis for the general test certificate

The following verifications were submitted by the customer for the evaluation of the performance of the Basic Protection Room ("Grundschutzraum"):

- [1] Test report no. 2009-B-0224/01 by MPA Dresden GmbH, 2009-02-25, Fire resistance test on a panel separating wall without built-in components;
- [2] Test report no. 2008-B-0868 by MPA Dresden GmbH, 2008-05-26, Fire resistance test on a panel separating wall without built-in components; F120;
- [3] Test report no. 2008-B-3395 by MPA Dresden GmbH, 2009-02-19, Fire resistance test on a room model, F90;
- [4] Test report no. 05-6-0453/02 by MPA Dresden GmbH, 2005-11-26, Fire resistance test with firing over 90 minutes as per TTC on a side wall module of the LSR 9.0 and LSR 9.3 with built-in soft firestop penetration seals and climate/excess pressure gate;
- [5] Expert opinion no. 20140900 by MPA Dresden GmbH, 2014-07-07, Installation of a Teckentrup "F90" fire door in the "Grundschutzraum Plus";
- [6] Test report no. 05-6-1081/03 by MPA Dresden GmbH dated 2005-11-26, Fire resistance test on a wall with impact test;
- [7] Test report no. 2007-B-2566 by MPA Dresden GmbH, 2007-09-03, Orientating fire resistance test on floor elements;
- [8] Test report no. 2008-B-2622 by MPA Dresden GmbH, 2008-07-16, Fire resistance test on the test rig in accordance with DIN 4102 Part 8: 2003 on an LSR 9.0 / LSR 9.3 variant "sealed floor", firing 90 minutes;
- [9] Test report no. 2008-B-2623 by MPA Dresden GmbH, 2008-07-16, Fire resistance test on the small test rig in accordance with DIN 4102 Part 8: 2003 on an LSR 9.0/ LSR 9.3 variant "inlaid floor", firing 90 minutes;
- [10] Test report no. 2013-B-2166/02 by MPA Dresden GmbH, 2013-10-28, Fire resistance test on a wall with pipe firestop penetration seals, small fire test;
- [11] Test report no. 20140128 by MPA Dresden GmbH, 2014-06-10, Fire resistance test on a wall element with cable boxes (cable penetration seals);
- [12] Test report no. 20140096 by MPA Dresden GmbH, 2014-06-10, Test of a wall segment with climate gate and Aestuver frame;
- [13] Expert opinion no. 2008-B-4439 by MPA Dresden GmbH, 2008-03-24, Reduction of sheet metal thickness from 1 mm to 0.75 mm;
- [14] Test report no. 20160554 by MPA Dresden GmbH, 2016-09-28, Fire resistance test on two doors by Teckentrup for GSR or GSR+- walls;
- [15] Test report no. 20161045/01 by MPA Dresden GmbH, 2017-11-07, Fire resistance test of cable and pipe penetration seals, used in GSR or GSR+- walls;
- [16] Test report no. 20161045/02 by MPA Dresden GmbH, 2017-12-14, Fire resistance test of cable and pipe penetration seals as well as fire protection valves, used in GSR or GSR+- walls;
- [17] Test report no. 20161659 by MPA Dresden GmbH, 2018-06-19, Fire resistance test of cable and pipe penetration seals, used in GSR or GSR+- walls;
- [18] Test report no. 20161660 by MPA Dresden GmbH, 2018-10-16, Fire resistance test of cable and pipe penetration seals, used in GSR or GSR+- ceilings;
- [19] Test report no. 20171359 by MPA Dresden GmbH, 2018-12-11, Fire resistance test of soft seal with cable configuration, according to DIN EN 1363-1<sup>1</sup> und DIN EN 1366-3<sup>2</sup>;

<sup>1</sup> DIN EN 1363-1:2012-10 Fire resistance tests - Part 1: General Requirements

<sup>2</sup> DIN EN 1366-3:2009-07 Feuerwiderstandsprüfung für nichttragende Bauteile- Teil 3: Abschottungen



- [20] Test report no. 20160640 by MPA Dresden GmbH, 2017-02-08, Fire resistance test of FSA Teckentrup 62 door (DIN EN 1634-1<sup>3</sup>, DIN EN 1047-2<sup>4</sup>);
- [21] Declaration of Conformity Reg. Nr.: dri15166400 by Rittal GmbH & Co. KG dated 2015-02-05;
- [22] Product documentation "Grundschutzraum" Basic Protection Room by Rittal GmbH & Co. KG.

## 2. Evaluation

The tested and assessed elements of the "Grundschutzraum Plus" and also the "Grundschutzraum Plus" itself fulfil the requirements placed on the space enclosure and the thermal insulation for 90 minutes ("EI 90" in accordance with DIN EN 13501-2:2016-12<sup>5</sup>) during a test in accordance with DIN EN 1363 1:2012-10 and other European test standards (including DIN EN 1364-1<sup>6</sup>) for space enclosing components<sup>7</sup>.

Space enclosing, non-load-bearing partition walls erected from modules of the "Grundschutzraum Plus" also fulfil the requirements for space enclosure and thermal insulation for 90 minutes ("EI 90" according to DIN EN 13501-2:2016-12) when tested according to DIN EN 1363-1:2012-10 and DIN EN 1364-1.

The building authority requirement "fire-resistant" for non-load-bearing interior walls (see §26 MBO<sup>8</sup> and Table 4.3.2 of the MVV TB (Edition 2017/1)<sup>9</sup>) can be fulfilled by partition walls constructed from modules of the "Grundschutzraum Plus".

In the "Grundschutzraum Plus" which is erected from the tested and assessed elements (see documentation, section 1), the requirements in accordance with DIN EN 1047-2: 2013-05<sup>10</sup> on the internal air temperature increase of max. 50 K and a max. relative air humidity of 85% r.h. during a firing from the outside as per the time-temperature curve in accordance with DIN EN 1363-1:2012-10 over 30 minutes are fulfilled.

## 3. Special notes

The general test certificate no. 20180592/02 does not constitute a general verification of usability in the sense of the State Building Code.

The general test certificate no. 20180592/02 dated 2019-05-16 is only valid for the constructions and products as described in the test reports and expert assessments.

The general test certificate no. 20180592/02 does not replace classification reports according to DIN EN 13501-2, declarations of performance and conformity.



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<sup>3</sup> DIN EN 1634-1:2014-03    Feuerwiderstandsprüfung und Rauchschutzprüfungen für Türen, Tore, Abschlüsse, Fenster und Baubeschläge- Teil 1: Feuerwiderstandsprüfungen für Türen, Tore, Abschlüsse und Fenster;

<sup>4</sup> DIN EN 1047-2:2013-05    Wertbehältnisse - Klassifizierung und Methoden zur Prüfung des Widerstandes gegen Brand - Teil 2: Datensicherungsräume und Datensicherungscontainer

<sup>5</sup> DIN EN 13501-2:2016-12    Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services

<sup>6</sup> DIN EN 1364-1:2015-09    Fire resistance tests for non-loadbearing elements - Part 1: Walls

<sup>7</sup> If the data backup room is exposed to flame from outside (fire outside the room).


<sup>8</sup> Musterbauordnung – MBO (German Model Building Code), Edition November 2002 (last modified on 2016-05-13 by decision of the Conference of the Ministers of Building

<sup>9</sup> Muster-Verwaltungsvorschrift Technische Baubestimmungen – MVV TB (German Model Administrative Provisions – Technical Building Rules), Edition August 2017.

<sup>10</sup> DIN EN 1047-2:2013-05    Secure storage units - Classification and methods of test for resistance to fire - Part 2: Data rooms and data containers

The validity of the general test certificate no. 20180592/02 expires on the 2024-05-15 and can thereafter be extended upon application.

Freiberg, 2019-05-16

  
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