

MultiGips

Technical data sheet

FG 70-B Strahlenschutz-Füllgips

EN 13279-1



RADIATION PROTECTION

MAIN FEATURES

Building material Special filling plaster containing barium sulphate with a high density based on a pre-mixed gypsum dry mortar EN 13279-1 for filling and closing ceiling connection joints and doorframes in radiation protection partitions of gypsum blocks for room-terminating structures in X-ray facilities.

MultiGips FG 70-B Strahlenschutz-Füllgips (radiation protection filling plaster) contains baryte (barium sulphate, $BaSO_4$) as the key constituent for its suitability as a filling plaster for use in conjunction with MultiGips radiation protection wall StWD.100-R48. MultiGips FG 70-B Strahlenschutz-Füllgips is a pre-mixed gypsum dry mortar according to EN 13279-1 with the additional property of "radiation protection".

Properties Mineral (calcium sulphate hemihydrate with 20% barium sulphate content)
High-quality, naturally white filling plaster with high adhesive strength
High adhesive pull strength (good tear resistance)
High water retention capacity (prevents dust formation)
Working time approx. 70 minutes
Reaction to fire A1 (no contribution to fire load, EN 13501-1)

Performance as building element Force-locked connection at elastic ceiling connections

Special features in MultiGips system walls for X-ray facilities Seamless radiation protection to ensure a continuous radiation protection layer
For filling and closing ceiling connection joints and door frames
For filling and closing slots and cut-outs for installation lines
Also for repairing defects

Documentation **EN** multigips.com
EU ce.multigips.de

TECHNICAL FEATURES

Performance feature	Building material
European standard	DIN EN 13279-1 (B4/20/2)
Reaction to fire, Euroclass	A1, no contribution to fire
Insulation against air-borne sound	No performance determined (NPD)
Areal thermal resistance	No performance determined (NPD)
Hazardous substances	No performance determined (NPD)
Consumption as filling plaster	approx. 2 kg/m ² wall
Consumption as doorframe filling plaster (for subsequent doorframe installation, wall thickness 100 mm)	approx. 17 kg/doorframe
Working time	approx. 70 minutes
Storage	approx. six months, dry on Euro pallets
Grain size	max. 1.25 mm
Flexural strength	≥ 1.0 N/mm ²
Compressive strength	≥ 2.0 N/mm ²
Dry density	approx. 870 kg/m ³
Water vapour diffusion resistance coefficient μ	approx. 10
Thermal conductivity λ	0.28 W/mK

ORDER INFORMATION

Performance feature	Building material
Material number	681
Form of packaging	Paper bag
Contents	25 kg
Packaging unit	40

ENVIRONMENTAL DATA

Performance feature	Building material, building element
Composition	Calcium sulphate of various stages of hydration with additives (barium sulphate, lime hydrate, mineral lightweight aggregate, tensides, cellulose ether, natural hydroxy acids)
Barium sulphate content	approx. 20%
Hazardous constituents	Calcium hydroxide Ca (OH) ₂ The calcium hydroxide causes irritation when swallowed, after skin contact, respiration or eye contact. The product is classified and labelled according to EC directives/GefStoffV (German Ordinance on Hazardous Substances). Observe the safety data sheet!
Persistence, bio-accumulation potential, toxicity	No PBT characteristics
Toxicity	Non-toxic
Bio-accumulation potential	No potential (inorganic, mineral)
For other environmental information, see also	Safety data sheet according to Regulation (EC) 1907/2006 (REACH) Environmental product declarations for gypsum products of the Bundesverband der Gipsindustrie e.V.

APPLICATION PRINCIPLES

Site prerequisites Only work with filling plaster when the air and building element temperature will not fall below +5 °C and no night frost is expected until complete drying of the gypsum. If possible, the top floor ceiling should be sealed in order to greatly reduce the effects of moisture during the construction phase.

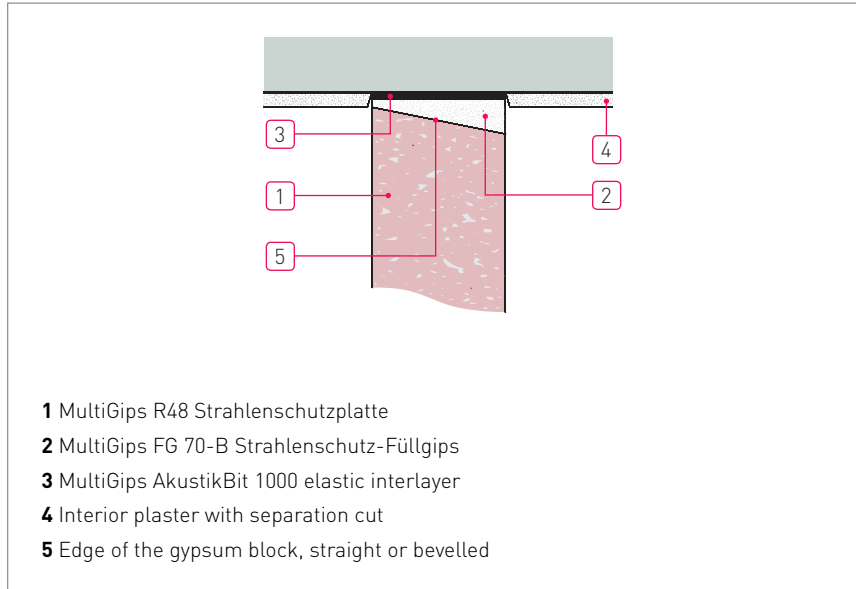
Gypsum blocks must be dry and free of dust and frost. Surfaces to be bonded must be thoroughly cleaned of gypsum dust, especially the surfaces of gypsum blocks that have been cut. Metal parts mounted in gypsum blocks, such as lintel reinforcement, metal doorframes, distribution boxes, pipelines, etc., whose wall-side cut-outs are to be closed with filling plaster, must be protected against corrosion before closing of the wall.

Filling of ceiling connection joints for elastic connections (filling plaster) In particular as a radiation protection structure StWD.100-R48, the ceiling connection must be formed with the radiation protection filling plaster MultiGips FG 70-B Strahlenschutz-Füllgips.

Do this by sprinkling 1.4 parts MultiGips FG 70-B Strahlenschutz-Füllgips (radiation protection filling plaster) into 1 part water, allowing it to slake and stirring until it is homogeneous. Do not mix with foreign material.

The elastic connection is created in a structural unit between elastic interlayer and filling plaster:

- Use MultiGips Randanschlussstreifen (elastic interlayer) (for MultiGips Strahlenschutzwand StWD.100-R48 [radiation protection wall] use elastic interlayer MultiGips AkustikBit 1000).
- Install the elastic interlayer with tight joints and free of cavities.
- The edges of the top blocks can be either horizontal or bevelled. Bevelled edges increase the bonding area for the filling plaster.
- Dust must be removed from the cut edges, and the edges must be moistened before filling the ceiling joint.
- Ceiling joints must be completely filled in accordance with the intended sound insulation, fire protection and structural engineering requirements.
- Do not plaster over the elastic interlayer; otherwise, create a separation cut immediately below the ceiling.



NOTE: Only complete filling of the ceiling connection joint ensures the structural properties as well as the radiation protection, sound insulation and fire protection properties of the gypsum block building element.

SAFETY AND DISPOSAL

Possible risks The material is categorised as non-hazardous according to Regulation (EC) No. 1272/2008

Disposal Recommendation Disposal according to official regulations.

European List of Waste 17 08 02 Gypsum-based construction materials other than those mentioned in 17 08 01. Disposal as landfill, landfill category 1 and 2 according the German ordinance on the list of waste.

Packaging Bags or other packaging material must be optimally emptied and can be recycled after appropriate cleaning.

Transport Non-hazardous within the sense of national and international transport regulations.

Safety data sheet The information in the current safety data sheet at ce.multigips.de applies.

Safety labelling



Hazard Symbol: Etching effect.
 Hazard Statements:
 H318 Causes serious eye damage.

Precautionary Statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center or doctor/physician.

CALCULATION AND DELIVERY INFORMATION¹⁾

Requirements for standard application based on experience. Deviations due to changes to general conditions such as wall dimensions, room layout, type of construction, transport routes, etc. must be taken into account.

System components	Unit	Material requirement	Delivery units Form of packaging	Packaging unit
Gypsum blocks MultiGips R48 radiation protection blocks	m ² /m ²	1	2.4 m ² /package (= 12 pcs.) 4.8 m ² /pallet (= 24 pcs.)	1 pallet (2 packages/ pallet)
Elastic interlayer AkustikPro 120-3/120-3 sk AkustikBit 1000 ²⁾	m/m ²	1.3	25 m roll 1 m strips	4x 25 m rolls 50 m/package
Gypsum-based adhesive for gypsum blocks Adhesive ClassicWeiss 90 Adhesive SuperWeiss 120/SuperWeiss 200 Adhesive Hydro 90	kg/m ²	approx. 1.0 – 1.5	25 kg bag	40 pcs./pallet
Fill ceiling joint, close electrical slots FG 70-B Strahlenschutz-Füllgips	kg/m ²	approx. 2 – 3	25 kg bag	40 pcs./pallet
Gypsum filler (backfilling doorframes) FG 70-B Strahlenschutz-Füllgips	kg/doorframe	approx. 17	25 kg bag	40 pcs./pallet
Surface smoothing plaster SG 90 Uni	kg/mm/m ²	approx. 0.8	25 kg bag	42 pcs./pallet

1) Based on experience. Deviations due to changes to general conditions such as wall dimensions, room layout, type of construction, transport routes, etc. must be taken into account.

2) As radiation protection wall StWD.100-R48 with verified sound insulation value of Rw 48 dB, the connections must be created with MultiGips AkustikBit 1000.

LITERATURE

EN 12859 (2011-05) Gypsum blocks – Definitions, requirements and test methods

EN 12860 (2002-07) Gypsum based adhesives for gypsum blocks – Definitions, requirements and test methods

DIN 4103-2 (2017-09) Internal non-load bearing partitions – Part 2: Partitions made of gypsum blocks

EN 15318 (2008-01) Design and application of gypsum blocks

NOTE: In Germany gypsum blocks according to EN 12859 are used for non-load bearing partitions on the basis of German standard DIN 4103-2. The European standard EN 15318 for design and application of gypsum blocks is not applicable in Germany as it contradicts national building authority requirements.

Technical data sheet for construction product based on harmonised standard. No guarantee of being exhaustive or generally valid; legal claims against VG-ORTH GmbH & Co. KG cannot be based thereon. Only valid in conjunction with the recognized rules of construction technology, as published in the regulations of the professional associations and their professional bodies, as well as in conjunction with the technical documentation of VG-ORTH GmbH & Co. KG. Does not apply to other specified construction products/types in conjunction with their installation. Provides technical information for professional users to improve their understanding and ensure that the construction product is used and applied as intended. Does not substitute compliance with the established rules of construction technology and professional use and design under practical conditions by professional users. Warranted performance by the manufacturer for the construction product at time of market introduction. No commitment to a legally binding guarantee of certain properties or suitability for a particular application. No guarantee concerning performance characteristics of product as used, which depend on proper use. The relevant technical values for the construction product were calculated in accordance with the testing standard. To achieve the physical, structural and construction properties of MultiGips gypsum blocks, only MultiGips system components or products recommended by VG-ORTH GmbH & Co. KG may be used.

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