

# MultiGips

## Technical data sheet

### Gypsum-based adhesive **Hydro 90**

EN 12860



## MAIN FEATURES

**Building material** Special gypsum-based adhesive EN 12860 for joining water-repellent gypsum blocks according to EN 12859 to create non-load bearing interior partitions and other gypsum building elements and to create their connections with adjacent building elements, especially in domestic areas of moderate humidity.

Hydrophobic (water-repellent) gypsum blocks are available for areas of application with moderate moisture loads. The hydrophobisation, which functions on the wall surface and in the cross-section, limits the water absorption of gypsum blocks and acts as a primer coat. MultiGips Adhesive Hydro 90 supplements this effect by reducing the water absorption in the joint area.

**Properties** Water-repellent, greenish-white gypsum-based adhesive (colour pigments) with high adhesive strength  
Practical working time of 90 minutes  
Mineral  
Reaction to fire A1 (no contribution to fire load, EN 13501-1)  
EPD Environmental Product Declaration

**Performance as building element** Reduction of the water absorption in the joint area  
Force-locked connection of gypsum blocks  
Force-locked connection to adjacent building element  
No change to the fire resistance of the building elements made from the gypsum blocks

**Extended area of application (interior)** For fastening elastic interlayer for elastic connections  
For full-surface smoothing of building elements of gypsum blocks  
For full-surface smoothing of levelled, smoothed, rubbed or felted plaster surfaces of gypsum, gypsum-lime, lime-gypsum, lime or lime-cement plaster (after pre-treatment, if necessary)  
For filling joints in wall openings with mounted parts

**Special features** Certified low level of hazardous substances for improved interior air quality helps eliminate health risks.  
Fulfils the requirements for use in interiors according to the Federal Environmental Agency in the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in the Federal Republic of Germany. Extremely low emissions.

**Documentation** **EN** [multigips.com](http://multigips.com)  
**EU** [ce.multigips.de](http://ce.multigips.de)

## TECHNICAL FEATURES

Performance feature	Building material
European standard	EN 12860
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)
Application thickness	0 – 3 mm
Consumption	1.0 – 1.5 kg/m <sup>2</sup> wall
Working time	approx. 90 minutes
Storage	approx. six months, dry on Euro pallets
Grain size	max. 0.20 mm
Flexural strength	≥ 2.0 N/mm <sup>2</sup>
Compressive strength	≥ 3.7 N/mm <sup>2</sup>
Dry density	approx. 960 kg/m <sup>3</sup>
Water vapour diffusion resistance coefficient $\mu$	approx. 10
Thermal conductivity $\lambda$	0.32 W/mK

## ORDER INFORMATION

Performance feature	Building material
Material number	311
Form of packaging	Paper bag
Contents	25 kg
Packaging unit	40

## ENVIRONMENTAL DATA

Performance feature	Building material, building element
<b>Composition</b>	Gypsum-based adhesive of calcium sulphate hemihydrate ( $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ )
<b>Hazardous constituents</b>	None
<b>Performance</b>	
<b>Emissions of volatile organic compounds (mg/m<sup>3</sup> TVOC after 3 days)</b>	0.010 <sup>1)</sup>
<b>Carcinogenic substances (mg/m<sup>3</sup> after 3 days)</b>	0.001 <sup>1)</sup>
<b>Natural radioactivity (mSv/a)</b>	≤ 0.02 <sup>1)</sup>
<b>Persistence, bio-accumulation potential, toxicity</b>	No PBT characteristics
<b>Toxicity</b>	Non-toxic
<b>Carcinogenicity, mutagenicity and toxicity to reproduction</b>	No CMR properties
<b>Bio-accumulation potential</b>	No potential (inorganic, mineral)
<b>Ecology</b>	Safe in air, water and soil
<b>For other environmental information, see also</b>	Safety data sheet according to Regulation (EC) 1907/2006 (REACH) Environmental product declarations for gypsum products of the Bundesverband der Gipsindustrie e.V.

1) Fraunhofer Institute for Building Physics, 10.2010

## APPLICATION PRINCIPLES

**Site prerequisites** Only work with gypsum-based adhesive for gypsum blocks 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-based adhesive. If possible, the top floor ceiling should be sealed in order to greatly reduce the effects of moisture during the construction phase. Construction can be carried out regardless of the effects of weather through the use of hydrophobic gypsum blocks at the base of the partition and/or MultiGips Hydro-Sockel (damp course) to prevent rising damp. If screed is to be subsequently installed, the covering of the insulation layer must be properly continued up the walls. In particular with poured asphalt screed, adequate cross-ventilation must be ensured.

**Use as gypsum-based adhesive** 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.

**Use as surface smoothing plaster** Surfaces of gypsum blocks that are to be completely smoothed must be sound and free of dust and frost. Remove any sinter layers, residues and contaminations of any kind before smoothing. To prevent dehydration in the gypsum-based adhesive and associated loss of strength, appropriate measures must be taken at high temperatures (e.g. prevent draughts, moisten plaster surfaces).

**Use in extended area of application (interior)** Metal parts mounted in gypsum blocks, such as lintel reinforcement, metal doorframes, distribution boxes, pipelines, etc. must be protected against corrosion before closing of the wall.

**Creation of partitions (as gypsum-based adhesive)** Sprinkle 1.4 parts MultiGips Hydro 90 into 1 part water, allow to slake and stir until homogeneous. Do not mix with foreign materials (the use of gypsum-based adhesive in custom recipes with gypsum dry mortars EN 13279, e.g. gypsum bonding plasters, is not permitted for the connection of gypsum blocks). Apply the gypsum-based adhesive thoroughly to butt joints and horizontal joints (fill entire joint with adhesive).

Join gypsum blocks with tight joints in a staggered pattern. Align the joined blocks vertically and horizontally within the working time of the gypsum-based adhesive (90 minutes). Remove the excess gypsum-based adhesive escaping from the joints after allowing it to harden slightly. Clean containers and tools with water immediately after use.

**Creation of surfaces (as surface smoothing plaster)**

Building elements of gypsum blocks do not require a plaster coating either for aesthetic reasons or to satisfy sound insulation and fire protection requirements. They are either smoothed only partially in the joint area or over the entire surface.

Building elements of gypsum block must be thoroughly cleaned of construction dust that could reduce adhesion prior to application of the smoothing plaster. Especially in the case of extremely dry air and/or high air and building element temperatures, the added water may be drawn out of the gypsum-adhesive relatively quickly, which can significantly impair the hydration, in other words the proper growth of the gypsum crystals for the gripping of the substrate as is necessary for achieving the rated strength. Appropriate measures must therefore be taken, such as moistening the surfaces to be smoothed. The air and building element temperature may not be below +5 °C from the time of application until complete hardening of the gypsum-based adhesive.

The full-surface smoothing is generally performed in a single layer in thicknesses between 0 and 3 mm. If multiple smoothing layers are required, each layer must be allowed to harden and dry completely before application of the next layer. Prime the previous layer with MultiGips Aufbrennsperre (concentrated primer), and apply the next layer only after this has dried. Perform any sanding and subsequent painting and adhesive work only after complete drying. After completion of the smoothing work, sufficient cross-ventilation is required.

Coatings of wallpaper, paints and non-woven liner as well as dispersion, latex, oil or varnish paint may be applied to smoothed building elements of gypsum block. Do not use any lime or silicate water paints!

Before any subsequent work, it may be necessary to apply a primer appropriate to the substrate and the subsequent coating/wall cladding. Exclusively pastes based on pure methyl cellulose may be used for wallpapering work. Rapid, proper and draught-free drying must be ensured especially after application of paper and fibreglass wallpapers but also after application of synthetic resin and cellulose plasters.

NOTE: If ceramic claddings, such as tile or natural stone, are to be applied over the full surface or part of the surface, building elements of gypsum blocks may not receive smoothing plaster in the relevant areas. The gypsum-based adhesive that escapes from the joints must be removed or cut off flush to the surface after hardening.

## 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 international transport regulations.

**Safety data sheet** The information in the current safety data sheet at [ce.multigips.de](http://ce.multigips.de) applies.

## CALCULATION AND DELIVERY INFORMATION

On the basis of practical 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.

<b>System components</b>	<b>Unit</b>	<b>Material requirement</b>	<b>Delivery units</b> Form of packaging	Packaging unit
<b>Gypsum blocks</b> e.g. MultiGips M100	m <sup>2</sup> /m <sup>2</sup>	1	4.0 m <sup>2</sup> /package (= 12 pcs.) 8.0 m <sup>2</sup> /pallet (= 24 pcs.)	1 pallet (2 packages/ pallet)
<b>Elastic interlayer</b> AkustikPro 120-3/120-3 sk AkustikBit 1000	m/m <sup>2</sup>	1.3	25 m roll 1 m strips	4x 25 m rolls 50 m/package
<b>Gypsum-based adhesive for gypsum blocks</b> Adhesive ClassicWeiss 90 Adhesive SuperWeiss 120/SuperWeiss 200 Adhesive Hydro 90	kg/m <sup>2</sup>	approx. 1.0 – 1.5	25 kg bag	40 pcs./pallet
<b>Fill ceiling joint, close electrical slots</b> FG 70 Füll- und Zargengips FG 700 Füllgips Spezial	kg/m <sup>2</sup>	approx. 2 – 3	25 kg bag 30 kg bag	40 pcs./pallet
<b>Gypsum filler (backfilling doorframes)</b> FG 70 Füll- und Zargengips FG 700 Füllgips Spezial	kg/doorframe	approx. 17	25 kg bag 30 kg bag	40 pcs./pallet
<b>Surface smoothing plaster</b> SG 90 Uni	kg/mm/m <sup>2</sup>	approx. 0.8	25 kg bag	42 pcs./pallet



## 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.

**Note on English translation** This is a translation of the technical data sheet valid in Germany. All stated details and properties are in compliance with the regulations of the EU and German standards and German building regulations. They are only applicable for the specified products, system components, application rules and construction details in connection with the specifications of the respective certificates and approvals. VG-ORTH GmbH & Co. KG denies any liability for applications outside of EU and Germany as this requires changes according to the respective national standards and building regulations.

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