

# MultiGips

## Technical data sheet

Gypsum machine-applied projection plaster **MP AquaProtect®**



### QUICK REFERENCE DATA

- Construction product** **Lightweight gypsum building plaster** EN 13279-1 B4/50/2  
**Principle active binding component** Calcium sulphate, hydrophobic  
**Use** Plastering walls and ceilings within buildings  
**Characteristics** Specifically for domestic areas of moderate humidity  
**Application** Mechanical application  
**Plaster system** Single-layer plaster  
**Average plaster thickness** 10 mm  
**Wet mortar** approx. 1,050 l/t  
**Consumption** approx. 0.95 kg/m<sup>2</sup>/mm  
**Efficiency** approx. 3.15 m<sup>2</sup>/bag; approx. 105 m<sup>2</sup>/t (plaster thickness 10 mm)  
**Compressive strength**  $\geq 3.5$  N/mm<sup>2</sup>
- Documentation** **EN** multigips.com  
**EU** ce.multigips.de  
**EPD** ibu-epd.com
- Order information** **Material number 918** 30 kg bag (pallet with 40 bag, 1,200 kg).
- Validity** Technical data sheet only valid in conjunction with the recognised rules of construction technology and the technical documentation of VG-ORTH GmbH & Co. KG.

## MAIN FEATURES

- Construction product** Lightweight gypsum building plaster B4/50/2 in accordance with EN 13279-1 for interior applications. Pre-mixed using hydration phases of the natural material gypsum and additives (dry powder products). Certified to bear CE marking.
- Application** For mechanical application of a single-layer smoothed plaster on walls and ceilings within buildings, including domestic kitchens and bathrooms, in order to create flat surfaces as a substrate for subsequent interior design work (e.g. tiling) for new and existing buildings.
- Primary application** For creating water-repellent wall and ceiling surfaces around showers, washbasins and tubs in domestic bathrooms and kitchens, utility rooms, guest bathrooms, sanitary facilities in hotels, etc. Not suitable for use in public wet rooms used for commercial purposes. High compressive strength of  $\geq 3.5$  N/mm<sup>2</sup> makes it suitable as a substrate and laying surface for large format ceramic cladding and covers.
- Performance in conjunction with the building element**
- Reaction to fire** Classified as a mineral, non-combustible construction material of material class A1 according to EN 13501-1.
- Fire resistance** For improving the fire resistance of building elements.
- Airborne sound insulation** For improving sound insulation of internal walls and ceilings by sealing gaps and increasing the mass per unit area.
- Areal thermal resistance** Calculation values for thermal conductivity of hardened gypsum binders and gypsum dry mortars according to EN 1745 (2012, Table A.12). The reference values apply for dry material used indoors. For damp material, these values must be modified according to EN ISO 10456.
- Hazardous substances** No performance determined.
- Product benefits** Mineral, single layer, water-repellent, particularly pressure-resistant. No need to change binding component when plastering kitchens and bathrooms. No need to refit mixing pumps. Plaster surfaces usually ready within just four hours. Outstanding processing characteristics. Very good drying performance.

## TECHNICAL FEATURES

<b>Dry density</b>	approx. 1,000 kg/m <sup>3</sup>
<b>Wet mortar</b>	approx. 1,050 l/t
<b>Consumption</b>	approx. 0.95 kg/m <sup>2</sup> /mm
<b>Efficiency</b>	approx. 3.15 m <sup>2</sup> /bag; approx. 105 m <sup>2</sup> /t (plaster thickness 10 mm)
<b>Initial setting</b>	> 50 min
<b>Working time</b>	approx. 3.5 hours
<b>Working temperature</b>	+5 °C – +30 °C
<b>Plaster thickness</b>	<p><b>Plaster thickness range</b> single coat, full area 5 – 35 mm walls; 8 – 15 mm ceilings</p> <p><b>Average thickness</b> single coat, full area 10 mm wall/ceiling</p> <p><b>Minimum thickness</b> single coat, limited area 5 mm wall/ceiling</p> <p><b>Increased thickness</b> single coat, limited area 35 – 50 mm wall</p> <p><b>Increased thickness</b> double coats, full area 35 – 50 mm wall, in combination with plaster reinforcement</p> <p><b>Thickness under coverings</b> (e.g. tiling) at least 10 mm</p> <p><b>Thickness above lathwork</b> (carrier) at least 15 mm</p>
<b>Flexural strength</b>	≥ 1.0 N/mm <sup>2</sup>
<b>Compressive strength</b>	≥ 3.5 N/mm <sup>2</sup>
<b>Adhesive strength</b>	≥ 0.1 N/mm <sup>2</sup>
<b>Vapour barrier value</b>	10 μ (dry)
<b>VOC emissions</b>	<p><b>TVOC</b><sub>28</sub> &lt; 1.0 mg/m<sup>3</sup></p> <p><b>SVOC</b><sub>28</sub> ≤ 0.1 mg/m<sup>3</sup></p> <p><b>Carcinogen</b><sub>28</sub> <b>EU Cat. 1 and 2</b> ≤ 0.001 mg/m<sup>3</sup></p>
<b>Storage</b>	Can be stored for approx. 6 months; store unopened in original packaging on pallets in a dry location. Protect against moisture absorption and frost. Packaging should be sealed airtight to prevent exposure to the air once opened and used without delay.

NOTE: The relevant technical values for the construction product were calculated in accordance with the testing standard. Consumption, volumes and times may deviate from test values under practical conditions.

## CHARACTERISTICS

- Technical** For plaster with reduced water absorption across the entire cross-section and the surface. Water absorption < 2% by weight after 2 h, < 6% by weight after 24 h fully submerged in water. As an application and laying surface without additional primer when using suitable tile adhesives.
- Appearance** For plaster with a levelled, smoothed surface.
- Environmental** 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 emission levels, even when combined with organic materials for substrate pre-treatment or emulsion paints.
- Sustainability** Environmental product declaration in accordance with the product category rules for factory-produced mineral mortar (EPD Environmental Product Declaration). Subject to independent external verification.

## PLANNING PRINCIPLES

### General structural pre-requisites for gypsum plaster

A construction product for interior plaster systems which is applied as fresh mortar and only achieves its final form after hardening/drying on the substrate. Substrates must therefore be tested for suitability, must be pre-treated if necessary and protected against weathering before plastering.

In general, substrates must be sound, dry, dimensionally stable and free of dust, grease and frost. Substrates which are unsuitable, too damp and/or frozen may result in damage.

The recommended maximum temperature for building elements to be plastered and interiors is +30 °C; the minimum temperature must be +5 °C. The fresh mortar must be protected against frost until it has hardened completely (with additional heating when working in winter months if necessary).

Building elements which are due to be plastered must be protected against rising damp and moisture penetrating from the other side. Surface water must be allowed to dry off before plastering, the drying off will also be required for application to the underside of exposed concrete ceilings. Ceilings under roofs should only be plastered once they have been insulated and sealed.

For non-force-locked and acoustically decoupled building elements and if movement of the building is to be expected, suitable separation cuts must be created at the borders of the plaster surfaces. If the sound insulation of the partition walls is expected to undergo significant deformation and/or is subject to demanding requirements, suitable interlayer or profiles are required.

The evenness of the plastered surfaces will depend on the evenness of the substrate and the angles involved. Evenness is classified in accordance with EN 13914-2, taking the angularity limits into account.

In order to achieve the essential characteristics of the solid plaster, the other applicable rules of moisture and thermal protection for the building element structure (comprising the substrate and interior plaster system) must be observed.

**Preparation** Testing and preparation in accordance with EN 13914-2.

Depending on requirements and/or the situation: seal off sensitive materials, fittings, components and prefabricated surfaces; pre-treat exposed metallic materials and fittings in the substrate to prevent corrosion; close mortar joints and surface defects; sweep off dust to improve adhesion; remove adhesion-reducing residues; remove protruding grout and cement; repair loose plaster; apply lathwork (carrier), beads and/or plaster reinforcement in individual areas or across the entire surface; apply spatterdash as necessary, e.g. to improve its bonding properties.

**Substrate pre-treatment Concrete** Test and preparation in accordance with EN 13914-2. Residual moisture should not make up more than 3% by mass from the surface to a depth of 3 cm when used for normal concrete. Dense and/or non-absorbent surfaces must be pre-treated with MultiGips Betonkontakt.

NOTE: At the start of the plastering work, ensure that the moisture in the surface zone has completely evaporated. This can be achieved four weeks after stripping of formwork under favourable weather conditions (e.g. sustained fine weather) or after no fewer than eight weeks (at least 60 frost-free days) under unfavourable conditions (e.g. high relative humidity, frost). If this state is not reached prior to plastering, an optional lathwork (carrier) can be used. Plastering is not permitted on frozen substrates or when the air or component temperature is below +5 °C (including at night).

NOTE: Large concrete elements made from porous lightweight concrete normally have a dry density of < 2,000 kg/m<sup>3</sup>. Those building elements normally take longer to dry than is practical for construction purposes. In such cases, plastering with gypsum dry mortars cannot be recommended.

**Substrate pre-treatment** **Masonry, absorbent, raw surfaces** (made of solid bricks, lightweight bricks, sand-lime blocks, aerated concrete blocks) Testing and pre-treatment according to EN 13914-2. Pre-treat the entire surface of highly absorbent substrates or substrates with uneven absorption with MultiGips Grundiermittel (highly concentrated primer) or MultiGips Aufbrennsperre (concentrated primer) to reduce or homogenise absorption.

NOTE: Substrates made of sand-lime bricks can have dense and/or non-absorbent surfaces. To improve bonding and to compensate for the differing absorption properties of stone and mortar, pre-treat the entire surface with MultiGips Betonkontakt if necessary.

**Masonry, porous aggregate material** (pumice) No pre-treatment required.

**Plasters** Remove existing layers, coatings, cladding and covers, check that surface is sound. Pre-treat surfaces of cement and lime-cement plasters with MultiGips Betonkontakt. Check surfaces of plasters based on gypsum and lime gypsum for existing fine plaster and sintered layers, remove them if necessary and pre-treat the entire surface with MultiGips Grundiermittel (highly concentrated primer), MultiGips Aufbrennsperre (concentrated primer).

**Gypsum panels** Sweep off dust to improve adhesion and pre-treat the entire surface with MultiGips Grundiermittel (highly concentrated primer) or MultiGips Aufbrennsperre (concentrated primer).

**Wood wool panels** Panels with a fully supported surface: No pre-treatment required. Panels with unstable support: Apply mineral spatterdash across entire surface, allow to dry completely.

**Rigid foam (EPS, XPS, PUR, PIR) in slab form** (also formwork elements) Pre-treat closed cell substrates with MultiGips Betonkontakt (minimum plaster thickness 15 mm, plaster reinforcement required).

**Panels made of foamed glass** No pre-treatment required. Plaster reinforcement recommended.

**Critical and non-load-bearing substrates** Cover building elements with a lathwork (carrier) incl.  $\geq 200$  mm allowance on all sides. Do not fix plaster bases to bridged component.

NOTE: Always allow bonding agent (MultiGips Betonkontakt) and primers (MultiGips Grundiermittel or Aufbrennsperre) to dry completely!

## APPLICATION PRINCIPLES

- General** Construction product which becomes soft/plastic after adding water, solidifies in accordance with requirements by absorbing water (> 50 minutes) and hardens by evaporation of water (> 3.5 hours). This construction product should therefore not be mixed with other materials and/or additives! Take care that the water is clean and at the correct temperature. Add water so that plaster has a lean consistency. Projection can be interrupted for up to 15 minutes depending on the ambient temperature. Clean the mixing pump and hoses if application is interrupted for a significant time.
- Smoothed plaster** Project the fresh mortar on evenly. Smooth with a large float. Trim the stiffened mortar so that it is levelled. Create the first smooth layer with a wide spatula. Moisten solidified mortar (if necessary) and sponge with a sponge float or power sponge float. Use the resulting mortar slurry to smooth the surface. Make separation cuts or smooth again as needed.
- Sponge-finished plaster** Not suitable.
- Levelled plaster** Like smoothed, but only roughly trim stiffened mortar for the provision of attachment and laying surfaces. Do not smooth, do not sponge!
- Single layer plaster, single coat** Project fresh mortar as a full plaster layer with uniform thickness and finish as smoothed or levelled plaster.
- Single layer plaster, double coats, with reinforcement** Project fresh mortar as 2/3 of plaster layer with uniform thickness and roughen. Embed reinforcement in this plaster coat. Project remaining 1/3 of plaster layer fresh in fresh and finish as smoothed or levelled plaster.
- NOTE: Reinforcement with overlap of at least 100 mm, overlap on adjacent components of at least 200 mm.
- Drying / hardening** Solid plaster reaches its standard strength through hydration (addition of water molecules as crystalline bound water) and air drying. Complete drying / hardening after approx. 7-14 days (10 mm plaster thickness) with persistently uniform evaporation (20 °C/65% relative humidity) with assistance from regular ventilation / cross-ventilation. To ensure that it hardens completely even under unfavourable conditions, e.g. high relative humidity and insufficient ventilation (as may be the case in winter), additional measures may be necessary, e.g. condensation drying, to ensure continued uniform evaporation and counteract the possible sintering of the plaster surface. Hardening plaster must be protected against heat stress when applying poured asphalt flooring, e.g. by supporting with continuous cross-ventilation.
- Further treatment** Suitable as a substrate for seals, coatings, claddings and coverings after complete drying / hardening as measures for further treatment of wall and ceiling surfaces in compliance with technical regulations. Only trim roughly to create attachment and laying surfaces, especially for wall tiles. Do not smooth, do not sponge!

## SAFETY AND DISPOSAL

**Hazard Symbol** GHS 05 Etching effect.



**Hazard Statements** H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

**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.

**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 to the German ordinance on the list of waste.

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

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 powdered form of pre-mixed construction product at time of market introduction. No commitment to a legally binding guarantee of certain properties or suitability for a particular application. Performance characteristics of the applied construction product dependent on substrate inspection and pre-treatment, professional application and requirement-oriented drying / hardening without guarantee. The relevant technical values for the construction product were calculated in accordance with the testing standard. Consumption, volumes and times may deviate from test values under practical conditions. To achieve the physical, structural and construction properties of MultiGips plaster systems, 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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