SM700®
Bonding, reinforcing and repair mortar

PRODUCT PROFILE

The highly versatile SM700 serves a wide variety of uses. It is particularly suitable as a bonding and reinforcing mortar for the STYROPOR®, MINERAL FIBRE and DIFFUTHERM WARM WALL insulation systems.
As thin-coat render for application to concrete and precision-block masonry, as bonding mortar to woodfibre slab and XPS-R insulation board, concrete, calcium silicate masonry etc., as reinforcing mortar for scrim reinforcement to XPS-R board, EPS concrete forms, basecoats and strong, textured, crazed mineral renders/renders and synthetic resin coatings, where necessary after suitable preparation.
Cracks with crack face movement > 0.1 mm cannot be accommodated!

- mortar group P II/strength class CS II to DIN V 18550/DIN EN 998-1
- premixed dry mortar with lime/cementitious binder
- low-chromate to TRGS (German Technical Regulations for Hazardous Substances) 613
- fire rating A (non-combustible)
- for indoors and outdoors
- with fibre and bonding admixtures
- water-repellent
- vapour-permeable
- very good adhesion
- tough
- for manual or machine application
- grey

TECHNICAL DATA (DIN EN 998-1, DIN V 18550 / 4108)	
Bulk density:	1.4 kg/dm³
Tensile bending strength:	2.3 N/mm²
Compressive strength:	4.2 N/mm²
Dynamic elastic modulus:	3500 N/mm²
Water vapour diffusion resistance factor μ:	11
Thermal conductivity (10°C, dry) $\lambda_{10,dry}$:	≤ 0.47 W/(m·K), for P=50%
	≤ 0.54 W/(m·K), for P=90%
Capillary water absorption:	W 2

COVERAGE CHART				
	Grading	**Coat thickness mm**	**Coverage kg/m²**	**Coverage m²/bag**
SM700 Original	1.5 mm			
Bonding (rough background)			6.0	5.0
Bonding (level background)			4.0	7.5
Reinforcement / render bonding layer		5.0	7.0	4.3
Overcoating textured renderwork			5.0	6.0
Scrim to basecoat		4.0	5.6	5.4

The above figures are approximate values and may vary according to background type.

PREPARATION

Cover or watertightly mask dirt-sensitive elements. Protect weather-exposed work surfaces from precipitation. In the event of exposure to sunshine, hang nets around scaffolding or postpone works. Check existing renderwork and coatings for strength and adhesion. Hack out and re-render any hollows; completely remove any peeling or flaking paintwork. Clean down concrete, coatings or existing renderwork with high-pressure water jet to remove dust and allow to fully dry out. Stabilize chalking or friable surfaces using GRUNDOL Tiefengrund LF deep-penetrating primer. Roughen smooth-faced XPS insulation board (STYRODUR® or equivalent), carefully dust down and secure with additional fasteners where necessary.

APPLICATION

For machine application: set water to approx. 320 ltr when starting up, then set to lean mortar consistency. For manual application: mix bag contents with approx. 8.2 ltr water. Apply mortar within 2 hours.

Insulation board bonding:

With Tongue & Groove, STANDARD, WOLLE, DIFFUTHERM or XPS-R insulation board WARM WALL systems, apply with 40% bond area for ribbon-and-dab method or to whole surface with notched trowel.

With polimell, volamit, Tongue & Groove and STANDARD WARM WALL systems, spray undulating strips directly onto background, with 50% bond area for polimell/volamit and 60% for Tongue & Groove/STANDARD. Press down insulation board, sliding into place and tapping to align.

For manual application of polimell and volamit, apply mortar strips at 10 cm centres to pre-treated/profiled panel face, bond to background and tap firmly to align.

With LAMELLE WARM WALL system, first apply thin coat and press firmly to work into surface, then apply SM700 over whole bonding face using notched trowel.

Fix insulation board in stretcher bond formation, without toothed corner arrangement for insulation thickness up to 200 mm, with toothed corner arrangement for insulation thickness of 220 mm and upwards. Allow min. 48 hours drying time prior to continuing work.

Insulation board reinforcement:

Fully bed jamb/lintel corner scrim unit at internal angles between jamb and lintel using SM700. Then fix angle scrim sections straight and true to line.

Apply 5-7 mm coat of SM700 and strike off level using darby. Bed corner scrim chevrons or scrim patches diagonally above or below corners of all openings.

Subsequently incorporate MARMORIT scrim over whole surface, with min. 10 cm lap at joints. Completely cover scrim with mortar. Remove fins/protrusions and scratch surface after initial set.

Repair mortar:

To level out uneven texture of clean, strong or suitably pre-treated existing renderwork or coatings, apply max. 10 mm coat of SM700. Incorporate MARMORIT scrim where required.

Thin-coat bonding render:

Apply 3-5 mm coat of SM700, strike off level and remove fins/protrusions after initial set.

Render bonding layer:

To concrete, XPS-R board, woodfibre slabs etc., apply min. 5 mm coat of SM700, strike off using widely notched trowel and roughen with broom.

Allow to dry and set for min. 3 days prior to application of basecoats.

REINFORCEMENT

As reinforcing mortar with scrim over whole basecoat surface, apply 4-5 mm coat of SM700, strike off level and true. Beneath actual scrim layer, incorporate a corner scrim chevron or approx. 30 x 50 cm scrim patch directly abutting and diagonally above or below corners of all openings. Embed MARMORIT basecoat/reinforcing scrim near surface and without creases, with min. 10 cm lap at joints.

As double-layer reinforcement to wall surfaces such as attached piers/pilasters, felt-floated renderwork and finishing coats with aggregate size < 2 mm (< 3 mm specified by DIN 18345 / 18350, VOB – German Construction Contract Procedures – Part C) and brushed textures. Apply a further approx. 4 mm coat of SM700 to whole surface after first reinforcing coat has set and incorporate a second layer of MARMORIT scrim so as to break joint with first layer. Alternatively, a second scrim layer may be embedded in freshly placed reinforcing mortar so as to break joint with first layer. Embed diagonal reinforcement between scrim layers.

Ensure that scrim is completely covered by SM700.

PLEASE NOTE
Rendering works are subject to the requirements of DIN EN 13914, DIN V 18550, DIN 55699 and DIN 18345/DIN 18350, VOB (German Construction Contract Procedures) Part C.
Mix dry mortar only with clean water. Do not use any foreign additives. Do not apply at air and/or wall temperatures below +5°C. Protect fresh renderwork against frost and premature drying out.
SM700 shall be allowed to dry and set prior to application of finishing coats or paints.

PLINTH TREATMENT
In areas heavily exposed to splashing, use MARMORIT SOCKEL-SM up to a height of 30 cm above ground level.
After fully drying out and setting, all reinforcing mortar surfaces in contact with ground or gravel beds shall be waterproofed/protected against moisture up to approx. 5 cm above ground level, in accordance with DIN 18195.
To this end, a 2.5 mm coat of MARMORIT SOCKEL-DICHT may be applied. Cover with nonwoven-faced studded sheet after drying.

SAFETY AT WORK
Mineral mortars exhibit an alkaline reaction upon contact with water. Risk of serious eye damage. Avoid contact with skin and eyes. Wear eye/face protection. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Requirements of safety data sheet shall be observed (current version obtainable at www.marmorit.de).
Once set, the material poses no physiological or ecological hazards.

MACHINERY/EQUIPMENT
High-performance rendering machines, e.g. PFT G4/G5 or equivalent
Stator: D4-3, half capacity
Rotor with extension: D4-3, half capacity
Mortar hoses: 25 mm dia
Wet mortar pumping distance: up to 40 m
Rotoquirl remixer required.

COMPOSITION
Binder: Hydrated lime (DIN EN 459), grey cement (DIN EN 197).
Aggregate: Limestone graded to DIN 4226.
Admixtures: Special fibres and special bonding admixtures, water repellents.

QUALITY
In accordance with DIN EN 998-1, the product shall be subject to initial type testing and ongoing factory production control (FPC). Being additionally subject to external monitoring, it is entitled to carry – alongside the CE mark – the RAL Quality Label for premixed dry mortar.

DELIVERY FORM/SHELF LIFE
30 kg paper bags.
Shelf life 9 months, subject to storage in dry, moisture-protected environment.

SUPPLY
Via Marmorit approved applicators or local distributors

NOTE
This data sheet, which replaces all previous editions, is designed to provide you with advice and assistance. The information presented herein reflects our present state of knowledge. It cannot, however, embody the sum total of good practice, nor incorporate the provisions of all relevant standards, codes of practice and guidelines. These – together with the relevant application rules and guidelines – shall be duly observed by the applicator!

TECHNICAL ADVICE
Information and advice may be provided by our external representatives or the MARMORIT Technical Department

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