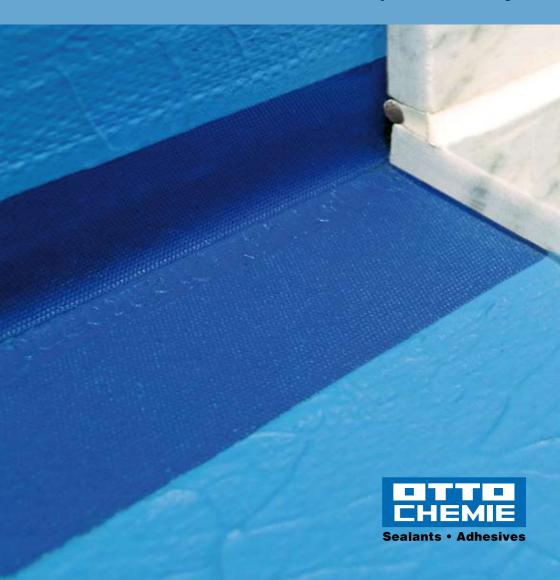
How to waterproof

wetrooms perfectly





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Preface

Moisture loads in showers and baths are highly variable. The spectrum ranges from domestic bathrooms for two people to shower areas in public swimming pools and spas. As low as the stress is in the former, it is so much higher in so-called permanentlywet areas, possibly even in combination with stress from chemical cleaning agents.

These areas are also classified differently in terms of building regulations. The area not subject to building regulations describes spaces with low stress, whereas the area subject to building regulations covers high-stress areas.

OTTO offers the right products for all stress categories.

According to the abP, **OTTOFLEX sealing strips** can be used for stress classes A1, A2 and C in the regulated area, and for stress classes 0, A01 and A02 in the non-regulated area according to the ZDB.

OTTOFLEX Protective Coating meets moisture stress classes A1 according to the abP and 0, A01 and A02 according to the ZDB.

OTTOFLEX Slurry Seal Coating can be used in high-stress wet areas in accordance with stress classes A1, A2 and B of the Building Regulations. It also meets stress classes 0, A01, A02 and B0 according to the ZDB.

Measure and cut materials



The OTTOFLEX Sealing Strip must be cut to the final size before application.

Apply the adhesive



The tile adhesive has to be applied all over the surface with a toothed spatula 4 x 4 mm (observe the open time of the adhesive).

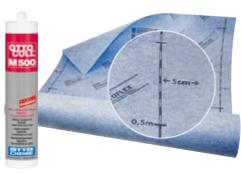
Press in the adhesive over the entire surface



Apply OTTOFLEX Sealing Strip into the adhesive bed across the whole surface. For the application (pressing in) the smooth side of a toothing spatula or a smoothing tool is recommended to use, which should be pulled of the Sealing Strip at an angle by using pressure. Trapped air must absolutely be avoided.

The joint must overlap by at least 5cm





Bond the OTTOFLEX Sealing Strip in the area of the butt joint with an overlap of at least 5 cm with a hydraulic binding C 2 tile adhesive (moisture resistance class 0). To achieve the moisture resistance classes A0, B0 and C, OTTOCOLL® M 500 must be used in the area of the overlap.

Tightly bond the overlapping area





For interior and exterior corners, edges as well as pipe ducts, products from the OTTOFLEX System can be used. (OTTOFLEX interior-/exterior corners, floor and wall sealing sleeves as well as OTTOFLEX sealing tape.) These products have to be bonded tightly in the area of the overlap. The application of the OTTOFLEX products can be effected before or after applying the OTTOFLEX Sealing Strip.

Apply the coating



5. Coverings can be applied only after the OTTOFLEX Sealing Strip is bonded with all overlappings, corners and connections. Waiting time is not necessary.

Apply the tile adhesive directly

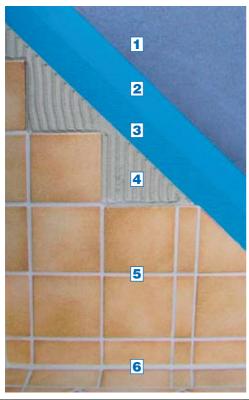


For laying tiles in thin-bed method, the tile adhesive has to be applied directly upon the OTTOFLEX Sealing Strip. The tiles are then to be applied all over the surface. The choice of the tile adhesive is to be matched according to the type of covering and loading. Basically a water resistant hydraulic binding tile adhesive can be used (in accordance with DIN EN 12004 - at least adhesive type C 2). For chemically stressed coverings, adequate adhesives, based on reaction resin and joint mortar are to be used.



OTTOFLEX – a complete system, which offers everything for a permanent seal of bathrooms, showers and damp rooms, including all the problem areas.

Steps using OTTOFLEX Protective Coating



- 1 OTTOFLEX Primer
- 2 OTTOFLEX Protective Coating 1st coat
- 3 OTTOFLEX Protective Coating 2nd coat
- 4 Tile adhesive
- 5 Joint mortar
- 6 OTTO silicone sealant, e.g. OTTOSEAL® S100
 - the premium bathroom silicone

Application using a spreading comb



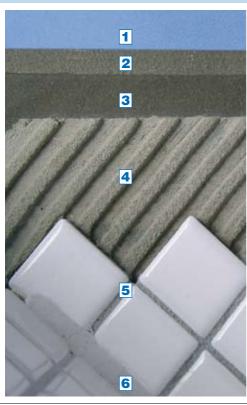
OTTOFLEX Protective Coating can be applied with a spreading comb but pay attention to coat the whole surface evenly.

Application using a lambskin roller



If using a lambskin roller apply the second coat crosswise onto the first coat in order to avoid an irregular coating.

Steps using OTTOFLEX Slurry Seal Coating



- 1 OTTOFLEX Primer
- 2 OTTOFLEX Slurry Seal Coating 1st coat
- 3 OTTOFLEX Slurry Seal Coating 2nd coat
- 4 Tile adhesive
- 5 Joint mortar
- 6 OTTO silicone sealant, e.g. OTTOSEAL® S100 the premium bathroom silicone

Application using a spreading comb

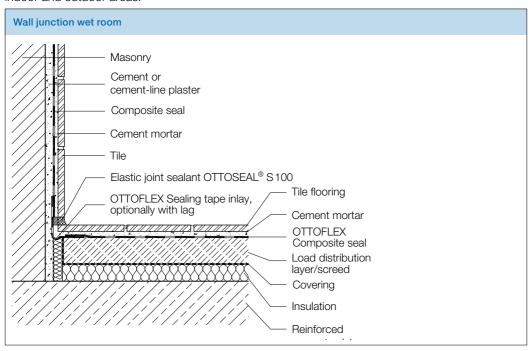


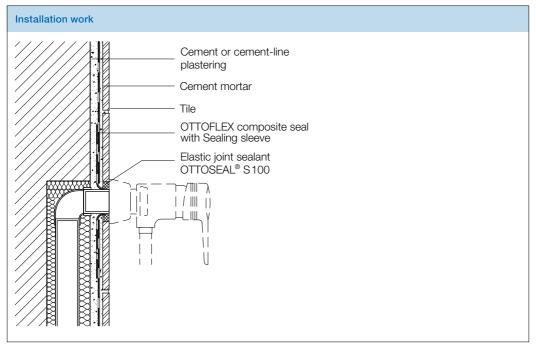
Applying OTTOFLEX Slurry Seal Coating with a spreading comb requires two coats in order to establish a dry coat thickness of 2 mm.

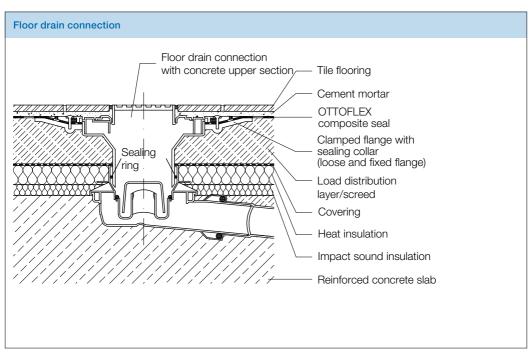
Application using a lambskin roller

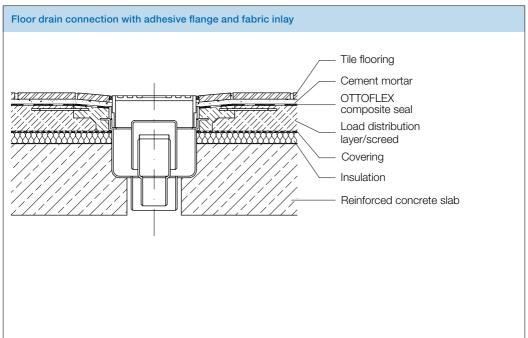


Applying OTTOFLEX Slurry Seal Coating with a short pile lambskin roller requires three coats in order to establish a dry coat thickness of 2 mm. Notes for executing composite seals with panelling and coverings made from tiles and plates for the indoor and outdoor areas.



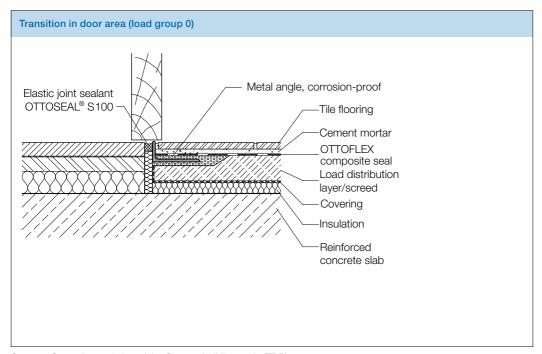






Notes for **execution**

Notes for executing composite seals with panelling and coverings made from tiles and plates for the indoor and outdoor areas.



Source: General association of the German building trade (ZDB)

OTTOFLEX Adhesive primer

Adhesive primer



Characteristics:

- Adhesion-enhancing primer for floor and walls
- High-strength bond adhesion even on sealed, smooth substrates such as glazed ceramic tiles
- Very short, 1-hour drying time on non-absorptive substrates; no drying time on absorptive substrates
- Compatible with commercially available tile adhesives and solvent-free coatings
- Solvent-free
- Store and transport frost-free

Fields of application:

- Primer and bonding course on absorptive and non-absorptive floor and wall areas indoors and outdoors before laying ceramic coverings.
- Suitable for a large variety of substrate, for example hydraulically hardening cement, lime and gypsum plasters, gypsum plaster boards, gypsum fibreboards, brickwork, aerated concrete, lime-sand brick, cement, anhydrite, magnesia and mastic asphalt screeds, timber floorboards, selflevelling floor-levelling compound/material, natural stone, glazed ceramic tiles, steel and glass.
- Creates a secure bond with the following coatings and water-based thin-bed mortars.

OTTO Deep Primer

The substrate strength agent



Characteristics:

- Solvent-free primer for floors and walls
- Impregnates deeply into the surface
- Forms a very good bonding agent for subsequent coatings
- Improves the adhesion of plasters, tile adhesives and wallpapers
- Dilutable 1:2 with water
- Store and transport frost-free

Fields of application:

- Priming and reinforcing of absorbent and less absorbent surfaces
- Primer should be applied prior to the application of acrylate coatings and commercially available solvent-free tile adhesives on gypsum boards, gypsum and lime-gypsum plasterings, gypsum floors, gypsum fibreboards, concrete, cellular concrete, sand-lime brick, bricks, masonry, plasters, screeds, anhydrite floors and melted asphalt screeds, panelling, priming and self-spreading floor leveling compounds
- Use within the scope of tile setting according to DIN 18157-1
- Facilitates the removal of wallpapers during renovating work
- Improves the load-bearing strength and firmness of the substrate

Standards and tests:

 Meets the requirement classes W1 and W2 according to ÖNORM B 2207

OTTOFLEX Primer

Primer



Characteristics:

- Synthetic resin dispersion based on styrene butadiene
- Solvent-free
- In combination with OTTOFLEX Protective Coating it complies with the requirements of the moisture resistance classes 0, A01, A02 according to ZDBinformation sheet as well as A1 according to abP
- Store and transport frost-free

Fields of application:

 Primer for OTTOFLEX Protective Coating, on absorbent and heavily absorbent substrates such as gypsum plasterboards, gypsum plaster components, plaster, concrete, cellular concrete, masonry, stone, screed, chipboard of fibreboard

Standards and tests:

- Tested in relation to OTTOFLEX Protective Coating in accordance with the test principles to issue a general appraisal certificate for liquid processable sealings in relation to tile and paving tiles
- Conform to the moisture resistance classes A0 according to ZDB and A according to abP
- Meets the requirement classes W1 and W2 according to ÖNORM B 2207

OTTOFLEX Protective Coating

Protective Coating



Characteristics:

- Synthetic resin dispersion based on styrene butadiene
- Sealing against humidity
- Compatible with commercially available tile adhesives and solvent-free coatings
- Compatible with OTTO silicone sealants
- Ready-to-use, easily applicable by rolling, painting or trowelling
- Very short drying time of 2 to 3 hours
- · High crack bridging ability
- Free of plasticisers and solvents
- Store and transport frost-free

Fields of application:

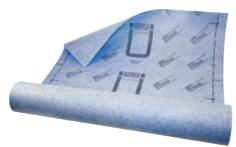
- Full-surface sealing under tiles, panels, ceramic coatings, marble and natural stone against nonpressing water
- Suitable for very various substrates, e. g. gypsum, gypsum plasterboards, (cellular-) concrete, masonry, stone, screed

Standards and tests:

- Tested in accordance with the test principles to issue a general appraisal certificate (abP) P-AB 075-03 for liquid processable sealings in relation to tile and paving tiles.
- Conform to the moisture resistance classes 0, A01, A02 according to ZDB and A1 according to abP
- Meets the requirement classes W1, W2 and W3 according to ÖNORM B 2207

OTTOFLEX Sealing Strip

Sealing Strip



Characteristics:

- Polvethylene sealing strip with double non-woven
- Impermeable to water and has water vapour retarding properties
- High practical stretching and crack bridging properties
- Resistant to ageing and decomposition
- Good resistance to aqueous solutions of salt, acids and alkaline solutions
- The product is alkali-resistant according to the test specifications of AbP Sealing in connection with tiles and slabs and of ETAG 022
- According to building material class B2

Fields of application:

- For application in interior areas
- Alternative sealing strip for sealing under ceramic tiles and natural stone in thin-bed method (e. g. wet areas such as bathrooms, shower facilities, perimeter areas of swimming pools, sauna, damp baths, damp sauna, also industrial areas in the food industry, in breweries or dairies)
- OTTOFLEX Sealing Strip is a crack-bridging. uncoupling, watertight, alternative sealing strip with nonwoven fabric for safe fastening of the tile adhesive applied.

Standards and tests:

- According to the moisture resistance classes A and C according to abP as well as A0 and B0 according to ZDB information sheet
- General building inspection certificate
- Meets the requirement classes W1. W2. W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOCOLL® M 500



The water-resistant premium hvbrid adhesive/sealant

Characteristics:

- 1-component adhesive and sealant based on silane-
- terminated polymers (hybrid) Excellent primerless adhesion on numerous substrates - even when exposed to water
- Very high mechanical strength, resistance to notches, tension and tearing
- For stress-compensating bonding and dynamic
- Low odour
- Free of isocvanates
- Silicone-free
- · Good weathering and ageing resistance
- Compatible with coatings according to DIN 52452

Fields of application:

- For application in interior and exterior areas
- Elastic bonding and mounting of various materials such as wood, derived wood products, glass, metals (e.g. aluminium, stainless steel, anodising aluminium, brass, copper), plastics (e.g. unplasticised PVC, plasticised PVC, fibrereinforced plastics etc.), mineral substrates (e.g. brick, tile, ceramic), fireproof building panels (gypsum board etc.)
- For the bodywork and vehicle construction, waggon and container construction, metal construction and apparatus engineering, ship building
- · Sealing of air condition and ventilation systems
- Different building applications such as staircase construction etc.
- Bonding of lacguered and enamelled glass
- Bonding of stone, natural stone and ceramic
- Bonding and sealing of OTTOFLEX Sealing Strip (in the overlapping) area) and accessories such as Sealing Tape, Corner Tapes and Sealing Sleeves (according to the requirements of ETAG 022)

Standards and tests:

- Declaration of no objection when in contact with food (ISEGA) Forschungs- und Untersuchungs-Gesellschaft mbH. Aschaffenburg.
- "Highly recommendable non-hazardous building product" according to building material list (TOXPROOF) of the TÜV Rheinland, Germany
- Suitable for applications according to IVD instruction sheet no. 19-1+21+24+30 (IVD = German industry association sealants)
- Testet on coated glass (2-comp. PU Direct Decklack 7-530 made by Selemix System) made by Glas Nagel - status 11/2006
- The instruction provided with regards to our adhesion and compatibility tests reflects the status at the time of testing. Changes to the coatings are possible but outside our sphere of influence. With regards to these we advise to contact the producers of glass/coatings concerned
- Conform to LEED® IEQ-credits 4.1 (Indoor Environmental Quality) adhesives and sealants
- Fulfills DGNB-characteristics 06 (DGNB e.V. = German Organisation for sustainable building)
- French VOC-emission class A+
- Certified according to GOS
- Declaration in "baubook" Austria

OTTOFLEX Slurry Seal Coating

Slurry Seal Coating

Characteristics:



- 1-component, flexible composite sealing
- Crack-bridging
- Easy to use
- Crack-free curing
- Watertight and permeable to vapour diffusion after curing
- Frost and ageing resistant after setting
- For application in interior and exterior areas
- Tested according to the latest test standards to issue a general appraisal certificate (abP) in relation to ceramic coverings.

Fields of application:

- Flexible composite sealing under ceramic coverings on balconies and terraces with a gradient > 1 %
- Flexible composite sealing under ceramic coverings in moisture-prone rooms, wet rooms and steam cabins
- For the weather-proof sealing of exterior cellar walls and supporting walls
- Sealing of solidly constructed swimming pools and water tanks; approved to a water depth of up to 4 m according to the current test standards
- Suitable for substrates which are sufficiently stable such as gypsum plasterboard, gypsum fibre, screed, heated screed, concrete, masonry, cellular concrete and plasters classified by mortar groups II and III
- In very wet areas conform to resistance classes A and B according to abP
- For sealing from the positive water side only

Standards and tests:

- General appraisail certificate "Sealing in relation to tiles and paving tiles" (MPA Claustal, Germany)
- Conform to the resistance classes A and B according to AbP
- Conform to the moisture resistance classes A0 and B0 according to ZDB information sheet
- Meets the requirement classes W1, W2, W3 and W4 (except for areas under high chemical stress) according to ÖNORM B 2207

OTTOFLEX Sealing Tape

Sealing Tape



Characteristics:

- Fabric reinforced elastomer tape
- Extremely flexible, ageing resistant, highly tear resistant
- Compatible with commercially available tile adhesives and solvent-free coatings
- Compatible with OTTO silicone sealants
- Safe connection with OTTOFLEX Protective Coating
- User-friendly because of fold for easy bending
- Marked with metre measuring scale
- Dispenserbox

Fields of application:

- For application in interior and exterior areas
- Sealing of wall corners to bridge cracks and joints
- Sealing of pipe ducts / waste pipes

Standards and tests:

- Tested in accordance with the test principles to issue a general appraisal certificate (abP) P-AB 075-03 for liquid processable sealings in association with tile and paving tiles, paragraph 3.5.6 (edition september 2004) - to apply water pressure of 3 bar over a period of 7 days
- According to the moisture resistance classes A0 and B0 according to ZDB as well as A, B and C according to abP
- Meets the requirement classes W1, W2, W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOFLEX Project Sealing Tape

Objektdichtband



Characteristics:

- Fabric reinforced elastomer tape
- Extremely flexible, ageing and tear resistant
- Compatible with commercially available tile adhesives and solvent-free coatings
- Safe connection with OTTOFLEX Protective Coating
- Compatible with OTTO silicone sealants

Fields of application:

- · Sealing of wall corners to bridge cracks and joints
- Sealing of pipe ducts / waste pipes

Standards and tests:

- Tested according to DIN 52123 10.2 test of the waterimpermeability / tear strength
- According to the moisture resistance classes A0 and B0 according to ZDB as well as A, B and C according to abP
- Meets the requirement classes W1, W2, W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOFLEX Floor Sealing Sleeve

Floor Sealing Sleeve



Fields of application:

· Elastic sealing sleeve used in floor areas for permanent waterproof sealing around pipe ducts under tiles, boards and ceramic coverings

Standards and tests:

- According to the moisture resistance classes A0 and B0 according to ZDB as well as A. B and C according to abP
- Meets the requirement classes W1, W2, W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOFLEX Ext./Int. Corner Tapes

Exterior/Interior Corner Tapes



Fields of application:

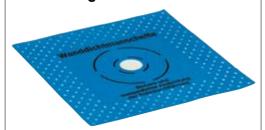
• Elastic corner tape for permanent waterproof sealing of exterior corners under tiles, boards and ceramic coverings

Standards and tests:

- According to the moisture resistance classes A0 and B0 according to ZDB as well as A. B and C according to abP
- Meets the requirement classes W1, W2, W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOFLEX Wall Sealing Sleeve

Wall Sealing Sleeve



Fields of application:

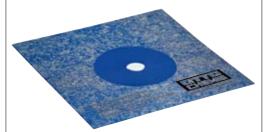
• Elastic sealing sleeve used on walls for permanent waterproof sealing around pipe ducts under tiles, boards and ceramic coverings

Standards and tests:

- According to the moisture resistance classes A0 and B0 according to ZDB as well as A, B and C according to abP
- Meets the requirement classes W1, W2, W3 and W4 according to ÖNORM B 2207
- French VOC-emission class A+

OTTOFLEX Flexible Sealing Sleeve

Flexible Sealing Sleeve



Fields of application:

• Flexible sealing sleeve with integrated expansion zone for permanently waterproof sealing of pipe ducts (dimensions: 22-42 mm) under tiles, boards and ceramic coverings

Standards and tests:

 According to the moisture resistance classes according to ZDB and abP

| | Stress classes | Α | Α0 | В | В0 | С |
|----------------------------|---|---|---|--|--|--|
| | Stress | high | moderate | high | moderate | high |
| | Areas of application | directly and indirectly stressed¹ wall surfaces in rooms in which utility and cleaning water is used frequently or continuously, such as in shower facilities (public or private) | directly and indirectly stressed' wall surfaces in rooms in which utility and cleaning water is not used very often, such as in domestic bathrooms, hotel bathrooms | container wall surfaces subject to stress from high-pressure water, such as public and private swimming pools, both indoor and outdoor | directly and indirectly stressed' outdoor wall surfaces with no water pressure stress, such as on balconies and terraces (not over rooms in use) | directly and indirectly stressed' wall surfaces very often or continuously exposed to utility and cleaning water, whereby limited chemical stress on the seal occurs, such as in commercial kitchens and laundries |
| | Concrete according to DIN 1045/DIN EN 206 | DMR | DMR | MR | MR | R |
| | Lime cement plaster of mortar group P II CS III according to DIN V 18550 and DIN EN 998-1 compression strength 3.5 to 7.5 N/mm² | DMR | DMR | - | MR | R |
| | Light lime cement plaster of mortar group P II CS III according to DIN V 18550 and DIN EN 998-1 compression strength at least 2.5 N/mm² | DMR | DMR | - | MR | R |
| | Sand-limestone flat block stones without or with only a thin coating | DMR | DMR | - | MR | R |
| | Cement plaster of mortar group P III CS IV according to DIN V 18550 and DIN EN 998-1 compression strength at least 6.0 N/mm² | DMR | DMR | - | MR | R |
| A. B. C | 998-1 without addition of lime hydrate/lime flux, compression strength at least 6.0 N/mm² | - | - | MR | - | - |
| h stress | Hollow wall panels made from lightweight concrete according to DIN 18148, processed in accordance with DIN 4103 with hydraulically hardened mortars | DMR | DMR | - | - | R |
| rhio | Cement-bonded mineral panels | DMR | DMR | - | - | R |
| Substrates for high stress | Composite elements of expanded or extruded polystyrene with mortar coating and fabric reinforcement | DMR | DMR | - | - | R |
| Subs | Porous concrete panels in accordance with DIN 4166, processed in accordance with DIN 4103 | DMR | DMR | - | - | R |
| | Gypsum plaster of mortar group P IV1 in accordance with DIN 18550-1 and 18550-2 | - | DMR | - | - | - |
| | Gypsum wall panels1 in accordance with DIN 12859 | - | DMR | - | _ | - |
| | Gypsum fibre panels in accordance with DIN 15283-2, gypsum panels in accordance with DIN 18180 and/or DIN EN 5201 | - | DMR | - | - | - |

¹ With direct and indirect stress of stress class A, moisture-sensitive substrates are not permitted for waterproofing. **Sealing compounds:** D Polymer dispersions • M Plastic cement mortar combinations • R Reaction resins With indirect stress, the following also applies:

in stress class A, moisture-sensitive substrates are not permitted for waterproofing in the case of indirect stress. In stress class A0, moisture-sensitive substrates may also be permitted in the case of indirect stress. Sealing is not necessarily required for moisture resistant substrates of stress class A0.

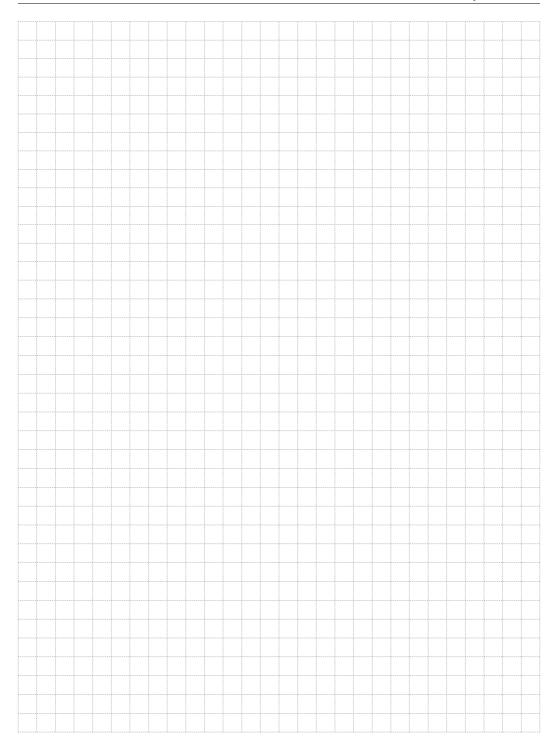
| | | Stress classes | Α | Α0 | В | В0 | С |
|---------------------------------------|----------------------------|--|---|--|---|--|--|
| | | Stress | high | moderate | high | moderate | high |
| | | Areas of application | directly and indirectly stressed¹ floor surfaces in rooms in which utility and cleaning water is used frequently or continuously, such as in swimming pool walkways and shower facilities (public or private) | directly and indirectly stressed¹ floor surfaces in rooms in which utility and cleaning water is not used very often, such as in domestic bathrooms, hotel bathrooms, floor surfaces with drains in these areas of application | container floor surfaces subject to stress from high-pressure water, such as public and private swimming pools, both indoor and outdoor | directly and indirectly stressed¹ outdoor floor surfaces with no water pressure stress, such as on balconies and terraces (not over rooms in use) | directly and indirectly stressed' floor surfaces very often or continuously exposed to utility and cleaning water, whereby limited chemical stress on the seal ocurs, such as in commercial kitchens and laundries |
| | rress A, B, C | Concrete according to DIN 1045/DIN EN 206 | MR | DMR | MR | MR | R |
| | | Cement screeds in accordance with DIN 18560 | MR | DMR | MR | MR | R |
| | | Mastic asphalt screeds in accordance with DIN 18560 | MR | DMR | - | - | R |
| A0, B0 | Substrates for high stress | Cement-bonded mineral panels ^{1,2} | MR | DMR | - | MR | - |
| ate stress | Substrates | Composite elements of expanded or extruded polystyrene with mortar coating and fabric reinforcement ^{1,2} | MR | DMR | - | - | - |
| Substrates for moderate stress A0, B0 | | Gypsum fibre panels in accordance with DIN 15283-2, gypsum panels in accordance with DIN 18180 and/or DIN EN 520¹ | - | DMR | - | - | - |
| Substrate | | Calcium sulphate-bonded screeds in accordance with DIN 185601 | - | DMR | _ | - | - |

¹ without floor drain

Sealing compounds: D Polymer dispersions • M Plastic cement mortar combinations • R Reaction resins With indirect stress, the following also applies:

in stress class A, moisture-sensitive substrates are not permitted for waterproofing in the case of indirect stress. In stress class A0, moisture-sensitive substrates may also be permitted in the case of indirect stress. Sealing is not necessarily required for moisture resistant substrates of stress class A0.

If floor drains are provided, elements with factory-installed floor drains and evidence of suitability from an abP must be used.





Part nº 9999533



Part n° 9999557



Part n° 9999875



Part nº 9999568



Part nº 9999551



Part nº 9999754



Part nº 9999574



Part nº 9999801





Part nº 9999596

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Your specialised dealer:

Notes:

The information in the present document corresponds to the status quo on going to print, refer to the index. With a new edition this edition becomes invalid. Due to the many possible influences during and after application, the customer always has to carry out trials first. Please observe the respective technical data sheet! This information is available on the Internet at www.otto-chemie.com. Errors and typographical errors are excepted.

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