

# SCHÖNOX® ZM

## Cement Based Self-leveling Compound

suitable on cement and gypsum based substrates. Designed for fast leveling of floors in interior areas.

SCHÖNOX ZM can be installed up to 1".

### Product characteristics

- EMICODE EC 1<sup>PLUS</sup> R: very low emission
- Benefits to Environment and Health
- for interior use only
- self-leveling
- high hardness and strength
- suitable on underfloor heating systems
- layer thicknesses above 1/16" up to 1/2" without aggregates
- layer thicknesses up to 1" with aggregates
- pumpable
- very low shrinkage
- suitable for castor wheel loadings above 1/16" according to DIN EN 12529
- moisture resistant (interior only), no moisture vapor emission limitations on properly prepared concrete
- conforms with USD 96/98/BC
- exceeds minimum Ff/FI requirements of ASTM and ACI when installed in accordance with the guidelines
- tested in accordance with ASTM C1708

### Applications

**SCHÖNOX ZM is suitable for filling, smoothing and leveling of substrates under:**

- flexible coverings
- wood floor, layer thickness above 1/8" (use elastic adhesives only)
- ceramic tiles

**as well as for filling, smoothing and leveling of unheated, cement based substrates under:**

- SCHÖNOX Moisture Mitigation Systems

### Substrates

**SCHÖNOX ZM is suitable on:**

- concrete, cement substrates
- rapid drying cement screed systems
- gypsum substrates
- OSB board, plywood (well screwed or bonded) prior to install flexible coverings o
- old substrates such as ceramic tiles and terrazzo
- old, water-resistant adhesive residues

### Requirements of substrate

- Subfloors must be smooth, sound, clean, dry and free of any contaminants which may hinder adhesion.
- Surface treatments or any "friable" areas of the subfloor must be mechanically removed back to a sound base and the substrate repaired with SCHÖNOX repair compounds as required.
- This product is not a vapor barrier and will allow free passage of moisture.

Follow the directions of the floor covering manufacturer regarding the maximum allowable substrate moisture content and test the substrate prior to installing SCHÖNOX ZM. Where substrate moisture exceeds the maximum allowed then application of SCHÖNOX SDG, SCHÖNOX MR 18 or SCHÖNOX EPA may be used to suppress residual moisture.

- Do not use SCHÖNOX ZM where hydrostatic pressure conditions exist or where moisture vapor emissions exceed the recommended levels.
- Gypsum substrates should always be dry. Do not use moisture mitigation systems on gypsum substrates.
- Old water-soluble adhesives should be removed completely, old water-resistant adhesives should be mechanically removed as far as possible. The complete mechanical removal of cutback (i.e. grinding, sanding, blasting) can be hazardous as old cutback adhesive may contain asbestos. Do not sand or grind adhesive residue. Harmful dust may result. Inhalation of asbestos dust may cause asbestosis or other serious bodily harm. Please consult the adhesive manufacturer and all applicable government agencies for rules and regulations concerning the removal of flooring and adhesives that contain asbestos. Prime remaining adhesive residues accordingly.
- Old floors such as ceramic tiles should be thoroughly cleaned and abraded.
- The requirements of the relevant valid standards, guidelines and data sheets apply.

### Priming

- **porous substrates such as:**
  - concrete, cement substrates prime with SCHÖNOX VD (1:3)
- **non porous, smooth, sound substrates such as:**
  - old water-resistant adhesive residues, removed as far as possible prime with SCHÖNOX SHP
- **gypsum substrates (sanded and vacuumed)**
  - prime with SCHÖNOX KH FIX
- **wooden substrates such as**
  - OSB board, plywood (well screwed and/or bonded)
  - prime with SCHÖNOX VD (undiluted)

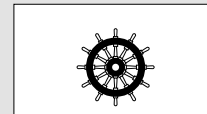
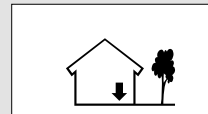
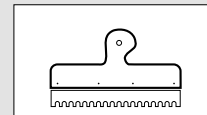
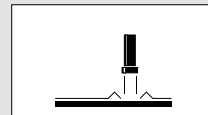
### Mixing ratio

- mix each 25kg / 55lb. bag with 6.5 liters / 6.8 quarts of water
- if SCHÖNOX ZM is extended with dry, clean

### Technical data

- pot life: approx. 30 minute
- ready for foot traffic: approx. 2 hours
- ready for covering: approx. 24 hours up to 1/4" thickness, after 48 hours up to 3/8" thickness, after approx. 4 hours up to 1" prior to installing ceramic tiles
- working temperature: not below 41°F
- coverage:
  - approx. 60 – 70 sq.ft. per unit at a thickness of 1/8" (depending on substrate conditions and aggregate used)
- compressive strength (ASTM C109):
  - 5800 psi / 35 N/mm<sup>2</sup> / 400 kg/cm<sup>2</sup> after 28 days
  - 2400 psi / 15 N/mm<sup>2</sup> / 160 kg/cm<sup>2</sup> after 1 day
- flexural strength (ASTM C348):
  - approx. 1300 psi / 7 N/mm<sup>2</sup> after 28 days
- tensile strength (ASTM C1583) at 1/8":
  - above 400 psi / 2.5 N/mm<sup>2</sup> after 3 days
- initial Set (ASTM C191):
  - approx. 60 minutes
- final Set (ASTM C191):
  - approx. 70 minutes
- cured density: 116 lbs. / cu.ft.
- UL-classified in accordance with ASTM E84 (ANSI/UL 723):
  - Flame Spread 0; Smoke Development 0

All values are approximate, are subject to local climatic fluctuations based upon conditions at 70°F with atmosphere of less than 65 % relative humidity following the recommended mixing ratio. Do not install underlayment or topping before the substrate has dried thoroughly.



aggregate (aggregate is added last) at a layer thickness of 1/2" – 1":

Type and amount of aggregate used will affect product performance. As qualities of locally available aggregates vary, we recommend to perform tests prior to use on a larger scale.

Do not overwater! Foam while mixing, or settling of the sand aggregate while placing, indicates overwatering.

### Recommended method of working

- Using a clean mixing drum, add SCHÖNOX ZM to cold, clean water to form a homogeneous mixture. Mix thoroughly for approx. 3 minutes using a heavy-duty drill (min. 600 rpm) is recommended to obtain a lump-free mix. Then pour the mix and spread using a smoothing trowel. Even surfaces are easily achieved using a pin leveler. In higher thicknesses using a spike roller is recommended.
- Contact to vertical structures should be avoided by putting in an edge strip.
- If a second layer of leveling compound is to be applied, prime the first layer with SCHÖNOX VD (diluted 1:1 with water) after drying. The maximum layer thickness must not be exceeded in case of two layer applications. The second layer must not exceed the layer thickness of the first layer.
- Protect curing SCHÖNOX ZM layers from high ambient temperatures, direct sunlight and draughts.
- Clean tools in water immediately.

### Packaging

- 25kg / 55lb. net weight in paper bags

### Storage

- Store in cool and dry conditions.
  - Shelf life: 12 months unopened.
- End of shelf life as indicated may affect selected product properties such as pot life and setting times, but does not generally indicate the end of the products suitability for the recommended application. Always test in a small, well defined area. In case of doubt contact the SCHÖNOX Technical Department.

### Disposal

- Empty packaging and dispose of in accordance with federal, state and local waste disposal regulations.

### VOC Content

- 0g/l (calculated), SCAQMD 1113

### LEED

May help contribute to LEED certification of projects in the categories:

- EQc2  
Low-Emitting Materials – 1 to 3 points
- MR Credit 1.1  
Building Reuse-Maintain – Existing Walls, Floors and Roof  
up to 3 points

- MR Credit 1.2  
Building Reuse-Maintain – Existing Interior Nonstructural Elements  
1 point

### Environmental Product Declaration (EPD)

- Declaration number:  
EPD-DIV-2013311-EN

### Instructions

- Do not use in areas of constant water exposure (such as swimming pools) as this may jeopardize the performance of the underlayment and the floor covering.
- Always install an adequate number of properly located test areas, to include the finish flooring, to determine the suitability of the product for its intended use. As floor coverings vary, always contact and rely upon the floor covering manufacturer for specific directions such as maximum allowable moisture content, adhesive selection, and intended end use of the product.
- Low substrate temperatures and/or high ambient humidity require longer drying times for primers.

### Precautions

- SCHÖNOX ZM contains Portland cement and sand aggregate. Avoid eye and skin contact. In case of contact, rinse immediately with plenty of water. In case of contact with eyes seek additional medical advice. Mix in a well ventilated area and avoid breathing powder or dust. KEEP OUT OF REACH OF CHILDREN. Carefully read and follow all cautions and warnings on product label. For complete safety information, please refer to the Material Safety Data Sheet, or visit our web site at [www.schonox.us](http://www.schonox.us).
- Never mix with cement or additives other than SCHÖNOX approved products. Observe the basic rules of concrete work. Do not install below 41°F surface temperature. Install quickly if substrate is warm.
- Low in chromate in accordance to REACH.

### Limitation of Liability

To the best of our knowledge, the technical data contained herein are true and accurate at the date of issuance but are subject to change without prior notice. We guarantee our product to conform to the specifications contained herein. We make no other warranty or guarantee of any kind, express or implied, including merchantability and fitness for particular purpose. Liability, if any, is limited to replacement of the product or refund of the purchase price. Labor or cost of labor and other consequential damages are hereby excluded. SCHÖNOX does not authorize anyone, including SCHÖNOX Representatives, to make any statements which supersede, modify or supplement the information provided on its printed literature or package labels without written confirmation.

The applicable recommendations, guidelines, regulations and safety data sheets are to be observed, together with the recognized architectural and engineering regulations. We guarantee that our products leave the factory in perfect condition. While our recommendations for use are based on tests and practical experience, they can only provide general guidance without any assurance as to product characteristics, since we have no influence over the conditions on site, the execution of the work or the method of processing. This product data sheet supersedes all previous editions.



The SCHÖNOX management system is certified to ISO 9001 and 14001 by DQS.

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