

# akurit MEP-LE

Lime cement lightweight plaster mineral

## inlay lightweight plaster type I

Lightweight plaster mortar LW CS II acc. EN 998-1

- water-repellent
- with mineral lightweight aggregate



## Applications

- especially suitable for use on high-performance thermally-insulating substrates with low bulk density
- as base plaster for the acceptance of finish coats, coatings or paint
- as felt-float finish plaster for indoor applications
- for external and interior use

## Properties

- European patent no. EP 0144965 B1
- entirely mineral-based
- vapour-permeable
- weatherproof and frost proof after hardening
- good workability
- high yield
- low modulus of elasticity for favourable stress behaviour
- extremely efficient, mechanically applied
- good stability under load
- minimal temperature stress thanks to low thermal expansion coefficient

## Composition

- cement in accordance with DIN EN 197-1
- calcium hydroxide in accordance with DIN EN 459-1
- graded stone aggregates in accordance with DIN 13139
- mineral lightweight aggregates according to DIN EN 13055
- additives for regulating and improving workability and product properties

## Substrate

### Suitable substrates

- highly thermally insulating wall materials (unfilled masonry blocks) such as lightweight bricks, aerated concrete and lightweight concrete blocks with thermal conductivities  $\lambda_R \geq 0.14$  W/(mK)
- highly thermally insulating wall materials (filled masonry blocks) with thermal conductivities  $\lambda_R \geq 0.07$  W/(mK)
- vertically perforated bricks
- sand-lime bricks
- normal concrete

### Condition / Testing

- For assessing the plaster primer, VOB/C DIN 18350, Section 3, DIN EN 13914-1/13914-2 as well as the plaster standard DIN 18550-1/18550-2 should be observed.
- The subsurface must be even, dry, clean, load-bearing, absorbent and free of adhesion impairing residues, efflorescence and sinter skins.
- Existing base plaster layers must have been roughened and have completely hardened.

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## Pretreatment

- Pre-treat highly absorbent plaster bases, e.g. aerated concrete, or plaster bases with different absorbency levels with AKURIT GAB absorption barrier.
- Normally absorbent masonry does not need pre-treating as a rule.
- Prepare limestone masonry and coarse normal concrete with a semi-covering (cross-linking) rough cast using AKURIT ZVP pre-spray cement plaster.
- Thoroughly sweep off aerated concrete.
- Prepare smooth formed concrete or dense-structure lightweight concrete substrates as well as lightweight wood wool building panels with a mineral bonding bridge, AKURIT MH grey universal bonding bridge or AKURIT UNI-H universal adhesive plaster in the combed bed method.
- In the area of different materials, e.g. blind boxes or floor slab supports, a partial surface reinforcement is to be applied directly on the substrate using AKURIT SK lightweight filling and adhesive mortar and AKURIT GF reinforcement mesh, fine. On corners and building openings, a diagonal reinforcement is to be performed in the outer area as previously described.

## Processing

### Temperature

- Do not process or allow to dry out at air, material or substrate temperatures below +5°C, or if there is a risk of exposure to night frost, or at temperatures above +30°C, or in direct sunlight, or on heated up surfaces, and/or in windy conditions.

### Mixing / Preparing / Processing

- When machine-processing: Adjust the amount of water accordingly to obtain a workable consistency.
- If the work is interrupted for longer periods, then clean the plastering machine and mortar hoses.
- Do not mix with other products and/or other substances.

### Applying / Processing / Assembling

- Apply material in layer thicknesses of at least 10 to maximum 20 mm.
- Exterior plaster must have an applied thickness of at least 15 mm.
- On highly or varyingly absorbent substrates, apply two layers, wet in wet.
- Then smooth off the fresh plaster area with suitable tools, e.g. a floating rule, to make it perpendicular and flush.
- Always thoroughly roughen the entire surface of the intermediate layers once the surface has hardened sufficiently. Use a suitable tool such as a lattice plane.
- If the plaster is applied in layers, then allow an intermediate standing time of one day per mm of plaster thickness before applying the next layer.

### Processing time

- approx. 2 hours
- The stated times apply for a temperature of +20°C and relative humidity of 65%.
- Mortar that has already started to harden must never be thinned down with additional water, remixed or applied.

### Drying / Hardening

- To prevent the plaster from drying out too quickly at higher temperatures, the plastered area should be kept moist for at least three days.
- If the weather conditions are unfavourable (e.g. driving rain, frost, strong sunlight and/or winds), then suitable protection measures must be taken, particularly in the case of freshly coated surfaces.
- Before applying the finish plaster, you must wait at least 1 day per mm of plaster thickness.

### Subsequent coating / workability

- For facing plaster grains < 2 mm we recommend priming the plaster base with AKURIT GMG mineral primer.

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## Tool cleaning

- Clean all tools and equipment with water immediately after use.

## Notes

- In the base joint area, a wall-base plaster, e.g. AKURIT SLP lightweight wall-base plaster or SLP-it., should be used.
- Carefully cover adjacent surfaces and components (e.g. windows, window sills, etc.). Wash off contamination immediately with water.
- Separate any neighbouring components from the plastered area.
- In order to create perpendicular and flush corners and joints for the respective application area, use suitable plaster profiles. When selecting plaster bases and profiles, please observe DIN EN 13658 as well as the data sheet "Data sheet for planning and application of metallic plaster profiles outdoors and indoors", issued by the European trade association for plaster profile manufacturers.
- For plaster surfaces where the plaster system is exposed to increased stress, e.g. where the facade is particularly exposed, special finish coats are used or there are considerable irregularities in the plaster base, we recommend applying a mesh filling compound on the whole base plaster area.
- Any sintered skin on the surface must be removed after sufficient curing.
- In the area of different materials, e.g. blind boxes or floor slab supports, an alkali-resistant plaster mesh is to be inserted wet-in-wet in the top third of the base plaster. On corners and building openings, a diagonal reinforcement is to be inserted in the outer area.

## Packaging

- 30 kg/sack
- loose in silo

## Storage

- Store sacks appropriately and in dry conditions on pallets.
- If stored in its original packaging, the product will keep for at least 12 months from the date of manufacture.

## Quantity required / Yield

- consumption: approx. 10 kg/m<sup>2</sup> per 10 mm plaster thickness
- yield: app. 29 l fresh mortar per 30-kg-Bag
- yield: app. 900 l fresh mortar per t

## Technical Data

<b>Product type</b>	Lightweight plaster mortar LW
<b>Category</b>	CS II
<b>Grain</b>	0 – 2 mm
<b>Water requirement</b>	approx. 6,8 l per 30 kg/sack
<b>Set mortar bulk density</b>	≤ 1.3 kg/dm <sup>3</sup>
<b>Compressive strength</b>	1.5 - 5.0 N/mm <sup>2</sup>
<b>Dynamic Young's modulus (E)</b>	1770 N/mm <sup>2</sup>
<b>Adhesive tensile strength</b>	≥ 0.08 N/mm <sup>2</sup>
<b>Capillary water absorption</b>	W <sub>c</sub> 2 according to EN 998-1
<b>Water vapour permeability μ</b>	5/20 (table value EN 1745)
<b>Thermal conductivity λ<sub>10,dry,mat.</sub> for P=50%</b>	≤ 0.39 W/(mK)
<b>Thermal conductivity λ<sub>10,dry,mat.</sub> for P=90%</b>	≤ 0,43 W/(mK)

All data are average values that were determined under laboratory conditions according to relevant test standards and application tests. Deviations are possible under practical conditions.

## Safety and disposal instructions

### Safety

- This product produces an alkaline reaction when it comes into contact with moisture/water. Therefore ensure that skin and eyes are protected. If it should come into contact with the skin or eyes, rinse them thoroughly with water. See a doctor immediately if it comes into contact with the eyes.
- Follow further instructions in the safety data sheet.

### GISCODE

- ZP1 (products containing cement, low-chromate)

### Disposal

- Dispose of the material in accordance with the official regulations.
- Completely empty and recycle the packaging.
- Dispose of hardened product in accordance with the local regulations. Do not allow to enter the sewer system. Dispose of the hardened product in the same way as concrete waste and slurries. Waste code according to the Ordinance on the European Waste Catalogue depending on the origin: 17 01 01 (concrete) or 10 13 14 (concretewaste and concrete slurries).

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## General notes

This information sheet provides only general recommendations. Should you have any queries relating to a specific application, please contact our technical sales advisor or call our hotline: +49 541 601-601. Since natural raw materials are used, the values and properties described may vary somewhat. All of the details given are based on our current knowledge and experience and on the assumption that the materials are professionally applied and used for their normal purpose. All of the details are non-binding and do not release users from their duty to undertake their own tests to ensure suitability for the intended application. Due to the effects of different weather, processing and construction site conditions, no guarantee can be given for the general validity of all details. We reserve the right to make changes as a result of further development of the product and applications engineering. The general rules for construction engineering, the valid standards and guidelines, and the technical working guidelines must be observed. The publication of this technical data sheet renders all previous editions of this data sheet void. Please obtain the latest information from our website.