

aerodurit[®] Renovating Cement Dehumidifying Plaster ZEP 2040

aerodurit[®] Renovating Cement Dehumidifying Plaster ZEP 2040 is a high-tech cement-based restoration plaster with high salt resistance and an increased degree of efficiency. Mineral restoration plaster for permanent problem solving of moisture, salt contamination damage and mildew. A dry mortar for wet and salt-stressed substrates, wet rooms, building components which are in direct contact with soil according to DIN 18557, according to DIN 18550 V 2005 04 / DIN EN 998-1, mortar group CS IV, EN 998-1).

UNIQUE PROPERTIES

Not hydrophobic, contains no synthetic chemistry, highly permeable, high salt resistance, water-repellent, frost-thaw resistant, no waiting time delay between the application of the plaster layers, homogeneous plaster structure (only one material for the entire plaster structure), no shrinkage and creepage, very good machine and manual processing, high daily output.

APPLICATION: Inside and outside

aerodurit[®] ZEP2040 offers versatile application possibilities and meets increased requirements.

New buildings: As a base plaster with excellent salt resistance, as a preventive measure under high stress due to indoor climate or weather.

Old buildings: In the moisture area, for permanent wall dehumidification (cellar renovation without expensive drying measures), as exterior and interior plaster, for storage rooms, galleries, churches, city walls, etc. As a base plaster, wall mortar, repair mortar, under tiles, for pipe installation, manhole plastering, garden walls. aerodurit[®] ZEP 2040 can be used in conjunction with aerodurit[®] dehumidifying plaster EP 2010 and aerodurit[®] Basic. Conditionally applicable to the effect of pressurized water on the fresh mortar. When hardened, aerodurit[®] ZEP 2040 is resistant to pressurized water and hydrostatic pressure.

TECHNICAL DATA

Compressive strength EN 1015 Class C II	8,1 N/mm ²
Bending tensile strength	2,5 – 4,5 N/mm ²
Water vapor diffusion resistance	$\mu = 9$
Air pore content of fresh mortar	21 %
Porosity	45 %
Grain size	0-1,8 mm
Tensile strength EN 1015-12	$\geq 0,4$ N/mm ² *

MIXING WATER

The water requirement for mixing is very low for aerodurit[®] ZEP2040. Initially stiff plaster slowly becomes more fluid during the mixing process. (Failure to comply with the amount of mixing water can influence the strength values).

The required MINIMUM THICKNESS of $\geq 2,5$ cm should not fall below 2,5cm (see Plaster thickness) The dry mortar is mixed with electric paddle mixer, free-fall or compulsory mixers. **MIX TIME:** approx. 3 - 4 minutes until air bubbles become visible. [IMPORTANT] Do not over-mix!

PROCESSING TIME

30 - 60 minutes after mixing. Keep electric paddle mixer at an angle, mix thoroughly. Mix whole trading units and process immediately.

CONSISTENCY

Consistency: plastic. PRACTICAL TIP Consistency check: "If you cut the mixed plaster with the edge of a trowel, the plaster edges must stand!".

SURFACE PREPARATION

Remove existing old plaster up to at least 80 cm beyond the visible moisture height or efflorescence zone. Crumbly masonry joints should be exposed as far as possible to a depth of 20 mm. Thoroughly remove dust and loose parts. Scrape out larger slots, widen joints and refill them with aerodurit[®] ZEP2040 before the actual plaster application with aerodurit[®] ZEP2040 and roughen well the surface. Remove sintered layers. Then apply aerodurit[®] ZEP 2040 as a full-coverage spray. For a professional relaxed balance between the wall surface and plaster layer, a bricking up of missing blocks, closing smaller holes etc. is required (manually or mechanically).

COMPENSATION LAYER

For horizontally and vertically uneven walls, a leveling layer should be applied to avoid stress cracks due to different thicknesses of plaster.

PRE-SPRAY / PRE-COATING

The pre-spraying is carried out with the same material by hand or by machine, generally closed over the whole surface and wart-shape-like. (Remove sintered layers,

even when sprayed / pre-coated!) The hardening time is approx. 12 hours. For the further plaster build-up use again the same material (aerodurit[®] ZEP 2040).

IMPORTANT NOTES ON PROCESSING

Throw the plaster seamlessly and strong. Applicable as single-layer plaster. Further construction options: Wet on wet in two layers the same day, or one layer a day another. The first and second render layer is produced with aerodurit[®] cement dehumidifying plaster ZEP 2040. Lightly apply manually or mechanically applied plaster layers. Wet the plaster surface with a damp sponge, not with a soaked wet sponge. Danger of binder enrichment and subsequent risk of surface cracks. Avoid sinter layers! Always rewet well between the plaster layers! Optimal dehumidifying effect with recommended total plaster thickness of at least 25 mm.

PROCESSING

A MATERIAL FOR ALL WORKING STEPS

The entire plaster construction is done with one material. The same material is used for all preparatory work, pre-spraying / grouting and plaster construction. aerodurit[®] renovating dehumidifying plasters have no stand times for applied plaster layers. Therefore, smaller and medium-sized render surfaces can be completed in 3- 4 workdays.

HAND PROCESSING

Put about 5.5 l of clean water per 30kg of dry mortar and mix with electric paddle or twin paddle mixer until the mortar has been mixed to plastic consistency and the air bubbles are visible (approx. 2-3 minutes in the middle). Do not over-mix. Only mix as much mortar as can be processed within 1 hour. aerodurit[®] Restoration Cement Dehumidifying Plaster ZEP 2040 can be applied up to 2 cm in one layer. After 45 - 60 min. hardening time (setting and pore stabilization), the plaster layers can be processed as usual after checking the felting ability (finger pressure test!), e.g. rubbing, felting, structuring with a painter's brush, broom structure, etc.. If applied in 2 layers, remove the cement sintered layer (thin cement skin) from the surface and roughen well. If you rub or felting too soon and too wet, there is a risk of cement-sinter-skin formation, which reduces the adhesion on the subsequent plaster application. Before application of the subsequent plaster layer, the last layer must be well roughened, freed from sintered layers and well pre-wetted depending on the absorbency of the substrate. Moisten already wet surfaces well, even if it is wet. The plaster should never be applied on

dry surfaces. (no adhesion!) If the application of a fine plaster * or decorative plaster * is intended as a top coat, then the surface of the Renovating dehumidifying plaster is to be raised horizontally and roughened. Before the top coat application, the surface should be thoroughly pre-wetted. When indoors, make sure that the humidity during the dehumidification phase is kept below 65%. This can be achieved by regular ventilation or similar measures. Too fast / strong drying out = mixing water removal (e.g. by dryers) can lead to stress cracks.

* Only system-conforming topcoats, such as aerodurit[®] superfine plaster FP2015, decorative plaster SSP1070, broom structure plaster SBS1065, etc., can be applied to aerodurit[®] renovating dehumidifying plasters.

PLASTER THICKNESS

General: 25 mm. For vertical or horizontal, uneven walls, a minimal plaster thickness of 25mm is required.

PLASTER CARRIER INSERT according to DIN 18550-2

When plastering cracked plastering grounds (e.g., old buildings), special measures are necessary, such as plaster carrier and/or Reinforcement Fibre Glass Mesh (embed in the last third of the last plaster layer).

MACHINE PROCESSING

aerodurit[®] Renovating- Cement Dehumidifying Plaster 2040 can be processed with all plastering machines if properly adjusted. [NOTE]: Reduced water requirement even with machine processing. When using plastering machines we recommend PFT G4 / PFT G5: Rotor & Stator D6 - 3 (standard) | Injection nozzle (top) | Hose Ø 35mm, max. 13.5l/m + hose Ø 25mm, max. 5l/m or hose Ø 25mm, max. 10 - 15m. | Spray nozzle 14mm | Ensure sufficient internal hose lubrication before starting, e.g. Cement slurry | Hotline +49 (0) 9323/31 760 | [www.pft.de]. During processing breaks > 20 Min, the machine and hoses must be emptied.

COLOR COATING

Please make sure that the high diffusibility of the Renovating Cement dehumidifying plaster is not restricted by vapor barrier coatings. We recommend silicate paint, especially aerodurit[®] SOLAMENT indoor climate-silicate paint.

STORAGE

Store dry, preferably on wooden pallets, protect against moisture. Do not exceed storage period of approx. 12 months.

The information contained in this technical information is based on proven experience. A liability for the general validity of the individual data and recommendations must, however, be ruled out due to the different processing conditions, since application and processing methods are beyond our control. The general rules of construction engineering must be respected. The values of self-monitoring and external monitoring can show deviations at the construction site due to the method of processing, the intensity of the mixing, the machine technology, the absorption behavior of the substrate, the application thickness, climatic environmental influences and age (cf. research community lime and mortar, report in standardization, Practice and theory of the 26th Aachener Baustofftag). As of 10.2018.