

ZEP2040

CEMENT MICROPORE SPECIALISED RESTORATION PLASTER

TECHNICAL DATA SHEET

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μ = 9
 WATER VAPOUR
 DIFFUSION
 RESISTANCE

**NON-
 HYDRO-
 PHOBIC**

aerodurit **SPECIALISED**

ZEP2040

**CEMENT MICROPORE SPECIALISED
 RESTORATION PLASTER**

Advantages	
Active capillary dehumidification	✓
Very high impact resistance	✓
Very high salt resistance	✓
Regulates the micro-climate in damp rooms	✓
Anti mould effect	✓
No stand time between individual layers	✓
Special Applications	
Footing plaster	✓
Rapid dehumidification after floods	✓
Preventive protection in floodwater areas	✓
Suitable for perimeter areas	✓
Plaster for stables	✓
Old and new buildings	✓
External and internal plaster	✓

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Mineral micropore restoration plaster for a permanent solution to moisture, salinity and mould problems. Premixed dry mortar for damp and salt laden undergrounds, wet rooms and below grade building parts pursuant DIN 18557, formerly mortar group P III pursuant DIN 18550 V 2005 04 / DIN EN 998-1, mortar group CS IV, EN 998-1.

COMPOSITION

High quality Portland cement, inorganic aerodurit®-additives.

APPLICATION

aerodurit® ZEP2040 offers a multitude of applications and fulfils the highest demands. Sealing in accordance with W3-E and drainage in accordance with DIN 4095 is recommended, if possible. In areas affected by damp in order to permanently dehumidify walls (cellar renovation without expensive drying measures), as external and internal plaster, for storerooms, tunnels, churches, city walls, etc. As footing plaster, wall mortar, repair mortar, mortar substrate for tiling, for pipe laying, render for shafts, garden walls. New buildings: As precautionary measure in case of high strain by room climate and/or weather. Limited application under the influence of water pressure on the fresh mortar; when hardened, the dehumidification plaster is resistant to hydrostatic pressure.

PROPERTIES

Non-hydrophobic, no synthetic chemicals, high diffusivity, high salt resistance, water repellent, resistant to freeze-thaw-cycles, no stand time between layers, homogenous plaster structure (one material for the entire plaster work), excellent mechanical and manual processing, high daily performance.

TECHNICAL DATA

Pressure resistance EN 1015 Class C II	8.1 N/mm ²
Flexural strength	ca. 2.5–4.5 N/mm ²
Water vapour diffusion resistance	$\mu \leq 9$
Air cavity content of fresh mortar	ca. 21%
Porosity	ca. 45%
Adhesive tensile strength EN 1015-12	$\geq 0.3 \text{ N/mm}^2$ (for fracture pattern A, B and C)
Thermal conductivity λ 10 dry (tabular value acc. EN 1745)	$\leq 0.59 \text{ W/(m.K)}$ für P=50 %, $\leq 0.67 \text{ W/(m.K)}$ für P=90 %
Working temperature (ambient air, object and material)	+5 °C to +30 °C
Grain size	0–1.8 mm
Fire performance	A1 / non-combustible

PRODUCT YIELD

30 kg with about 5.5 litres of water yield about 21 litres of fresh mortar, respectively 1.2 m² with a plastering layer of 20 mm.

SUPPLY FORM

30 kg in paper bag. A maximum of 42 bags on euro pallet.

CONSISTENCY

Plastic. The plaster is initially firm but during the mixing process will become more liquid. Practical tip: «When the mortar is cut with the trowel, it should stand on its own.»



PLEASE NOTE

Partially cured material must not be further processed. The plaster must be prevented from drying out too quickly and from weather influences such as sun, wind, driving/torrential rain and frost. To ensure successful curing and drying, temperatures should be above +10 °C with a relative humidity of ca. 60%. Indoors, this can be achieved by airing (do not use building dehydrators).



PLASTER THICKNESS

Do not exceed 20 mm per layer. Optimum dehumidifying effect with a minimum total plaster thickness of 25 mm (including spatter-dash/rough cast). **Minimum plaster depth 20 mm.**



MANUAL PROCESSING

Low water usage. Use approximately 5.5 litres clean water per 30 kg dry mortar. Hold the electric mixer at an angle and mix at medium rpm for 2 to 3 minutes, until the mortar is ductile and air bubbles are visible. Do not over-mix and only mix as much material as can be processed immediately.



MACHINE PROCESSING

Low water usage. With the correct setting, aerodurit® ZEP2040 can be used in all plastering machines. For machine processing, we recommend a PFT G4 / G5: rotor and stator D6–3 (standard or twister), injection nozzle on top. Hose \varnothing 35 mm with max. 13.5 lineal metres and hose \varnothing 25 mm with max. 5 lineal metres or just hose \varnothing 25 mm with max. 10–15 lineal metres. Spray nozzle 14 mm. Also check www.pft.de

Ensure that the inner hose is sufficiently lubricated before starting up (e.g. cement slurry). In case of processing breaks exceeding 20 minutes, machine and hose must be emptied.

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SYSTEM SETUP – STEP BY STEP

PLASTER CARRIERS AND REINFORCEMENT FABRICS

In accordance with DIN 18550-2 and DIN EN 13914-1. When plastering cracked surfaces (e.g. old buildings), it is necessary to use special methods, like the reinforcement of the plaster, substructures or plaster carriers. In the final third of plaster, reinforcement fabric (10x10 mm mesh) should be used.

1 PREPARATION OF BASE LAYER

The existing plaster should be removed from the walls at least 80 cm beyond the line of dampness or the area of crystallisation. Scrape out crumbling grout to a depth of ideally 20 mm and fill with aerodurit® ZEP2040. Thoroughly remove all dust and loose particles. Remove sinter layers and **moisten**. For levelling of heavily uneven wall surfaces, it is recommended that holes, unevenness and gaps in the walls be closed or filled out where necessary, either manually or mechanically. When working on uneven walls, a levelling layer should be applied first to avoid tension cracks caused by differing plaster thicknesses.

2 PRIMER

Surfaces have to be primed with system-conform aerodurit® CALSOL NATURE M-5 Mineral Primer to establish load-bearing capacity (observe the stand time of approximately 12-24 hours).

3 SPATTER-DASH/ROUGH CAST

About 3–5 mm. aerodurit® ZEP2040 can be applied either by hand or with a machine, generally with total coverage and warty (remove sinter layers, also when spatter-dashing and rough casting). The stand time for the spatter-dash is approximately 12 hours. aerodurit® ZEP2040 is also used for the remaining plaster structure.

4 PROCESSING

aerodurit® ZEP2040 is used for the entire plaster structure. It has no stand time for the individual layers. Apply the plaster seamlessly by skimming with force and using a plasterer's float to create a level surface. Single layer plaster applications are possible. If two layers are applied (wet on wet), the pale damp surface should be well roughened. Smooth the plaster surface with a **moist**, not dripping wet sponge, (danger of bonding agent accumulation resulting in surface cracks). **Sinter layers are to be avoided at all cost. Thoroughly wet the surface between the application of each plaster layer. Even if the surface is already moist, it should be watered and, if necessary, the watering should be repeated during the processing. The plaster should never be applied to a dry surface (no adhesion).**

5 SURFACE COATING

After 45 to 60 minutes for hardening and pore stabilisation, the final plaster layers can be treated as usual (e.g. levigated, smoothed, etc.) once the stability has been confirmed (finger pressure test). If a finishing plaster is to be applied, the surface should be **intensely watered** and roughened. Only system-compatible aerodurit® finishing plasters may be applied to aerodurit® plasters.

6 PAINTS AND COATINGS

Please take care not to reduce the high diffusivity by using impermeable paints or coatings. We recommend silicate paints, in particular aerodurit® SOLAMENT CLIMATE Silicate Paint.

STORAGE

Store weatherproof and frost-free on wooden pallets in a cool, dry room. Reseal opened packaging immediately. Closed packaging has a shelf life of 12 months from the production date under proper storage conditions. Keep out of the reach of children.

For further details please refer to the safety data sheet.

The specifications contained in this technical data sheet are based on years of proven experience by the company aerodurit®. A liability for the general validity of the individual data and recommendations, must, however be ruled out due to the varying processing conditions, as the application and processing methods are beyond our control.

The general rules of construction engineering must be adhered to. The data of internal or third-party monitoring may vary on the construction site due to processing methods, intensity of the mixing, technical specifications of the machines, adhesion of the substrate, application thickness, environmental influences, and the age of the material (refer to »Forschungsgemeinschaft Kalk und Mörtel e.V.« (research community lime and mortar), Report on norms, practical experience and theory, »26th Aachener Baustofftag«).

Previous data sheets become void through the publication of this data sheet. Stay up-to-date! Refer to www.aerodurit.com for the most current version of our data sheets.