

# AURORA

LIME CEMENT THERMAL INSULATION RESTORATION PLASTER

## TECHNICAL DATA SHEET

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**FREE OF  
 BIOCIDES  
 AND POLY-  
 STYRENE**

**NON-  
 HYDRO-  
 PHOBIC**

**aerodurit** **SPECIALISED**

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LIME CEMENT THERMAL INSULATION RESTORATION PLASTER

**Advantages**

- Thermal insulation plaster (WLG 055) ✓
- Free of biocides and polystyrene ✓
- Moisture and salt resistance ✓
- High diffusivity ✓
- Anti mould effect ✓
- Monolithic plaster structure ✓

**Special Applications**

- Object-related for listed buildings ✓
- Also suitable for cellars, vaults, etc. ✓
- Old and new buildings ✓
- External and internal use ✓

**aerodurit** **SPECIALISED**

# AURORA

THERMAL INSULATION PLASTER SYSTEM

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## LIME CEMENT THERMAL INSULATION RESTORATION PLASTER

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aerodurit® AURORA Thermal Insulation Restoration Plaster is a mineral dry mixture of hydraulic and non-hydraulic lime in accordance with DIN EN 459-1 and highly porous, lightweight mineral aggregates. Designed as a biological building and insulation plaster, it can be used indoors as well as outdoors due to its monolithic plaster structure.

### COMPOSITION

Calcium hydroxide, cement, perlite and inorganic aerodurit® additives. Mortar group P II (lime-cement plaster) with lightweight mineral aggregates (perlite = expanded volcanic rock), thermal conductivity group WLG 055 (in accordance with ISO 8301), CS I in accordance with DIN 998-1.

### AREA OF APPLICATION

For old and new buildings, indoors and outdoors, especially for »soft« substrates such as lightweight perforated bricks and lightweight or gas concrete. Not suitable as a foundation for tile and natural stone. Exterior: Do not use in the footing area or underground.

### PROPERTIES

High thermal insulation performance (thermal conductivity group WLG 055), without biocides and polystyrene, purely mineral, non-hydrophobic, highly diffusible and water-repellent, moisture / salt resistant, resistant to freeze-thaw-cycles, monolithic plaster structure, resistant to mould and algae, easy to apply.

### TECHNICAL DATA

Category	CS I in accordance with EN 998-1
Machine processing	Yes
Water absorption coefficient w	0.5–2.0 kg/(m <sup>2</sup> ·h <sup>0.5</sup> )
Compressive strength	ca. 0.9 N/mm <sup>2</sup>
Yield per bag	ca. 40 litres of fresh mortar
Dry bulk density	ca. 240 kg/m <sup>3</sup>
Water vapour diffusion resistance	μ = 6–7
Grain size	0–4 mm
Colour	Light beige
Water usage	ca. 16 litres per 13 kg bag
Thermal conductivity coefficient λ	ca. 0,055 W/m·K in accordance with ISO 8301
pH value	11–13
Fire resistance	A1 / non-combustible
Compressive strength group	CS I
Processing temperature (ambient air, object and material)	+ 5 °C to + 30 °C
Processing time for fresh mortar	max. 2 hours

All technical data are characteristic values determined under laboratory conditions on the basis of standardised tests. Deviations under practical conditions are possible. The characteristic values and processing properties were determined at +20°C and 60% relative humidity.

### MATERIAL CONSUMPTION

Plaster thickness	ca. kg/m <sup>2</sup>	ca. m <sup>2</sup> /bag	ca. m <sup>2</sup> /t
1 cm	3.3	4	300
2 cm	6.6	2	150
3 cm	9.8	1.33	100

### DELIVERY FORM

13 kg in a paper bag. A maximum of 21 bags on euro pallet.



### 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 AERODURIT® AURORA

Do not exceed 30 mm per layer. Maximum application thickness 10–60 mm. For plaster thicknesses exceeding 30 mm, the plaster has to be applied in two or more layers.



### MANUAL PROCESSING

Prepare ca. 16 litres of clean water per 13 kg of dry mortar. Mix lump-free with an electric paddle mixer held at an angle using medium speed. Mix again after a maturing time of 5 minutes. Mix only the quantity that can be processed immediately.



### MACHINE PROCESSING

We recommend the PFT G4 plastering machine. Equipment suitable for thermal insulation plaster must be used (insulation plaster mixing helix), spraying nozzle min. 16 mm, worm casing D8–1.5 with clamp. Maximum total hose length 20 metres: up to max. 15 metres with mortar hose Ø 35 mm – can be extended by 5 metres with mortar hose Ø 25 mm, if required.

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

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### PREPARATION OF BASE LAYER

The base layer must be checked regarding its load-bearing capacity before the application of the plaster (VOB/C, DIN 18350). The surface must be free of dust and dirt. Film-forming release agents such as formwork wax have to be removed in advance. **Non-load-bearing layers of old plaster** and paint must be completely removed down to the masonry. Scrape out crumbling grout to a depth of 1–2 cm. Remove loose mortar residues and dust mechanically (e.g. with a wire brush or wire broom). Defective areas have to be filled with masonry similar to the original or with aerodurit® EP2010. **Moisten the surface before the application of the primer.**

2

### PRIMER

Surfaces have to be primed with system-conform aerodurit® CALSOL NATURE M-5 Mineral Primer to establish load-bearing capacity (see technical data sheet aerodurit® CALSOL NATURE M-5).

3

### SPATTER-DASH / ROUGH CAST

For smooth, non-absorbent or barely absorbent surfaces: ca. 3–5 mm. With aerodurit® EP2010 Micropore Specialised Restoration Plaster manually or with a machine, generally covering the entire surface and warty (remove sintered layers). The stand time for the spatter-dash is ca. 24 hours (see technical data sheet aerodurit® EP2010).

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### SOAKED MASONRY

Efficient thermal insulation is only possible on dry masonry. We recommend to dehumidify soaked masonry with a 20 mm plaster layer of aerodurit® EP2010 before applying aerodurit® AURORA Thermal Insulation Restoration Plaster. **In this case, old plaster and paint must be completely removed down to the masonry.** Duration of the dehumidification at least 14 days, depending on the type of masonry, thickness of the wall and the degree of saturation (see technical data sheet aerodurit® EP2010).

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### THERMAL INSULATION PLASTER LAYER

With aerodurit® AURORA Thermal Insulation Restoration Plaster. Moisten the surface. Leave the first layer to stand with a rough spray finish or comb it out horizontally with a notched trowel / plastering scarifier. After hardening (approx. 24 hours), the second layer of plaster (max. 30 mm thickness) can be applied to the previously roughened plaster, that has been levelled off perpendicularly, aligned and then roughened again after setting. Once the desired total application thickness has been reached, a stand time of 14 days must be observed.

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### REINFORCEMENT PLASTER LAYER

Plaster surface must be free of dust and dirt. **Moisten the surface.** Apply approx. 3 mm aerodurit® EBM08 Embedding Mortar with reinforcement fabric (4 x 4 mm mesh size). Observe a stand time of 12 hours. Subsequently, apply a second layer (ca. 4 mm) of aerodurit® EBM08 and observe the stand time of 24 hours.

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### SURFACE COATING

Plaster surface must be free of dust and dirt. If necessary, remove existing sinter layers, **moisten the surface** and roughen if necessary. Only system-compatible aerodurit® surface plasters may be applied to aerodurit® plasters.

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### 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](http://www.aerodurit.com) for the most current version of our data sheets.