

TECHNICAL DATA SHEET

ECO ALL IN ONE

One-component waterproofing. A division of ETS Europe.



Silicate Systems

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Revision: 25/02/2020
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PRODUCT INFORMATION

DESCRIPTION:

ECO ALL IN ONE is a one-component mineral waterproofing slurry. ECO ALL IN ONE can be used for the preparation of a waterproof coating on concrete and other substrates of cement.

PROPERTIES AND BENEFITS

- Eco-Binder technology
- High chemical & saltwater resistance
- Environmentally friendly
- Mineral
- VOC- and APEO-free
- Durable at early stage
- Low in chromate according to TRGS 613
- Resistant to sulfate according to DIN 4030, exposure class XA2
- Waterproof up to 1.5 bar
- In case of negative water load, waterproof up to 0.3 bar depending on substrate
- suitable for drinking water according to DVGW W 270 and W 347
- Also processible by machine.

RANGE OF USAGE

ECO ALL IN ONE is ideal for the waterproofing of drinking water reservoirs and for the waterproofing of building constructions in interior and exterior areas, as well as in permanently wet and under water areas against soil moisture, non-pressing ground and seeping water and pressing water.

TECHNICAL INFORMATION.

| | | | |
|-------------------------------|------------------------------|--------------------------------|--|
| Number of coats | 2 layers | Mixing ratio | 4.25 – 5.0 l water per 25 kg powder |
| | | Slurry | 4.75 – 5.0 L |
| | | Creamy | 4.25 – 4.5 L |
| Compressive strength | approx. 25 N/mm ² | Flexural strength | approx. 6 N/mm ² |
| Processing temperature | Min. +5 °C, max. +35 °C | Processing time at 20°C | approx. 45 min |
| Single layer thickness | 2 mm | Consumption | approx. 2 kg / m ² and mm layer thickness |
| Total application | max. 4 mm | | |

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| thickness | | | |
|--------------------|----------------|----------------------|--------------------------------|
| Loadability | Curing at 20°C | Density | |
| Walkable | 1 day | Bulk density | approx. 1.3 kg/dm ³ |
| Light load | 1 day | Fresh mortar density | approx. 1.9 kg/dm ³ |
| Fully loadable | 3 days | | |

The information above is given based on our experiences. Adjustment may be required in case of object specific fluctuations.

PREPARATION OF SUBSTRATE

For the preparation of the substrate, the substrate needs to be sound, dimensionally stable, and free of loose particles. Laitance coatings, lime and binding coats of paint should be milled off or sandblasted. An open capillary system must be present. The waterproofing may only be applied on structural structures that remain crack-free. The application of waterproofing for areas with water under pressure is only possible on concrete surfaces. Cracks in the concrete may no longer occur.

Pre-wet absorbent surfaces like concrete, cement plaster, sand-lime brick (fully joined with cement mortar), brick, heavy concrete and hollow block masonry walls. Pre-wetting according to moisture content of the substrate until the surface is dull-moist. Avoid puddles.

Note: In case of internal waterproofing against negative water pressure, the substrate must provide a sufficient bonding strength.

Post-processing and coating protection

For the use of Eco All In One as a final coat it is recommended to apply a suitable surface protection system. To achieve a higher abrasion resistance or chemical resistance we recommend a combined application of Eco Hydro Sil and Eco Hydro Glass. Please refer to the respective data sheets for more information.

Rounding of edge areas

For rounding of wall-floor or wall-wall transitions Eco All In One is prepared as a cove. First, the mortar is mixed with 4.75 – 5.0 liters of water per 25 kg powder material (mixing procedure described above). Slightly pre-wet the surface on both sides of the specific edge. Afterwards apply Eco All In One (application by brush) as a bonding slurry for complete covering. The subsequent application of the cove is done wet-in-wet. Therefore, Eco All In One is mixed with quartz sand (grain size: 0.1 – 0.4 mm) in a ratio of 1:1. Pre-mix both components roughly, then add 3.5 liters of water per 25 kg of dry mix. The fresh mortar is applied above the edge. The material is then finished with a round trowel. The side length of the cove should be around 2 – 4 cm. All edges in the cove are smoothed with a wetted brush to equalize the surface with the bonding slurry. For waterproofing purposes all cove areas must be fully covered with one additional layer of Eco All In One.

Observe a rigid connection between the specific substrates during application of coves. Both substrates should be fully cured and free of swelling and shrinkage.

In case of floating or unbonded screeds the cove should only be connected to the ground. Prevent wall connections by installing edge joints. The gap must be filled with a permanently elastic compound.

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MIXING AND APPLICATION

First, add 4.25 - 5 liters of water per 25 kg powder material into the mixing container. Then, pour **ECO ALL IN ONE** inside while stirring. We recommend the use of a drill mixer with paddle. The material has to be mixed intensely until it is lump-free. After a setting time of 3 - 5 minutes mix again for 1 more minute. Mix only as much material as can be applied within 60 minutes. Do not mix ECO ALL IN ONE with any other liquid component except water.

On extremely absorbent substrates it is recommended to use ECO PRIMER. Observe drying times. ECO ALL IN ONE is usually applied with a mason's swab or trowel. The first coating must be applied by brush. The next coating might be applied by trowel and must be rubbed off with a brush thereafter. Total thickness of the coating is 4 mm max. In order to achieve a good adhesion to horizontal surfaces, the first coating should be applied onto the substrate by using a broom with hard bristles. Deeper ruptures up to a layer thickness of 20 mm can be filled with ECO ALL IN ONE which is mixed with quartz sand. Mixing is carried out analogous to the application of coves.

Note concerning cove preparation: For the preparation of coves it is necessary to mix ECO ALL IN ONE and quartz sand (ratio 1:1) with 14-15% water. As bonding slurry ECO ALL IN ONE has to be applied by a wide brush. After that the filling of the cove has to be made by round-trowel.

Note concerning aftercare: After applying the waterproofing slurry the coating must be kept moist for at least 24 hours, avoid direct solar radiation and frost for additional 2 days after applying waterproofing slurry.

Note concerning protection: Protective coatings, slabs, tiles, gypsum-free mortar may only be applied on the walls or on the floor when ECO ALL IN ONE has sufficiently hardened.

Consumption details

| Exposure group | Min. layer thickness [mm] | Consumption [kg/m ²] |
|------------------------------------|---------------------------|----------------------------------|
| Soil moisture & non-pressing water | 2.0 | approx. 4.0 |
| Pressing water (max. 1,5 bar) | 3.0 | approx. 6.0 |

TOOLS AND CLEANING

Mason's swab, trowel, brush, pump.

All equipment should be washed clean and dried before and after application.

PACKAGING AND STORAGE

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Packaging: 25 kg paper bag

Storage: 12 months in original packaging and in a dry and controlled temperate environment (not below 0 °C, recommended 10 – 25 °C). Reseal opened containers immediately and use within a very short time.

SAFETY, ECOLOGY AND ELIMINATION

ECO ALL IN ONE contains cement and reacts alkaline with moisture/water. Avoid inhaling dust when opening packaging. Protect skin and eyes during the mixing process. Please refer to the Material Safety Data Sheet (MSDS) which can be requested on www.ets-europe.be for further information on safety during transportation, storage, handling and disposal. Follow instructions on the packaging.

Note: Do not apply ECO ALL IN ONE on frozen substrate or in freezing conditions and do not apply during rain. Use structural measures such as expansion joints to prevent formation of cracks in buildings. An appropriate flexible or elastomeric sealant must be used to waterproof joints. As fixed, waterproofing is a structure that requires application of waterproofing slurry onto the surface exposed to water (positive stress). When internal waterproofing of a building is required (negative stress) - in particular, renovating existing building - the structure must be able to withstand the water pressure. The selection of a suitable waterproofing depends on the water load, the composition of the ground and the structural design. All these factors should be taken into account before starting the work.

The content of this technical data sheet corresponds to the latest development and our applications experience. All information is based on ideal conditions and therefore does not apply for every application purpose. Due to different materials, substrates and different actual site conditions no warranty is given for the customer's application. In particular, we assume no liability based on this information or any verbal statements. The only exception is when we can be blamed for the case of intent or gross negligence. In that case the customer has to prove that he has transmitted all required information completely and in a timely manner for a proper and promising evaluation by ETS Europe. Any further details regarding the application of our products have to be confirmed in writing by ETS Europe. The customer must test the product's suitability for the intended application and purpose. We reserve the right to change the product specifications due to the ongoing development. Apart from that our general terms and conditions are valid. This data sheet supersedes all earlier technical data on this product. The technical data sheet can be requested on www.ets-europe.be.

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