

1. DESCRIPTION

ISODUR ONE is a dry mortar, formulated from mixed binders, very low density special aggregates (Expanded polystyrene - EPS) and additions, for the execution of thermal insulation external and internal renders.

It is a product intended for sprayed application.

2. FIELD OF USE

ISODUR ONE is used as thermal insulation render, applied over substrates in brick masonry, cement blocks, concrete or wood, as an insulating coating system that promotes the thermal treatment of the surrounding walls using single and / or double wall.

Used in building renovation interventions, the application of *ISODUR ONE* is a practical and efficient method to increase thermal performance of those constructions, whether in double panel or monolithic walls.

The insulation coating system that integrates *ISODUR ONE* was designed to meet regulatory requirements. The system applied continuously on the surrounding surfaces promotes efficient treatment of thermal bridges, contributing decisively to the prevention of pathologies in construction.

ISODUR ONE may also be used as lightweight screed for the filling of floors.

3. PRODUCT CHARACTERISTICS

Characteristics	Value	Standard
Colour	White	-
Granulometry	< 1,5 mm	EN 1015-1
Paste product	Value	Standard
Mixing water	125,0 % ± 5,0 %	-
Density	350 ± 50 kg/m ³	EN 1015-6
Theoretical consumption	1,5 kg/m ² /cm	-

Hardened Product	Value	Standard
Compressive strength	Class CS I	EN 1015-11
Adhesion to brick / Mode of fracture	0,1 MPa / B	EN 1015-12
Density	200 ± 50 kg/m ³	EN 1015-10
Capillarity	W1	EN 1015-18
Permeability to water vapour	≤ μ 5	EN 1015-19
Reaction to fire	Class B-s1-d0	EN 998-1
Thermal Conductivity	0,05 W/(m.°C)	EN 12664

(*) The results presented were obtained in tests performed under normal laboratory conditions and may vary on site depending on the application conditions and the equipment used for application.

4. APPLICATION

a) Substrate preparation

Substrates should be free from dust, release agents, loose or instable materials, efflorescence, as well as from any type of material which affects normal adhesion conditions.

In hot or dry weather, the substrate should be saturated with water, and application should be started when it is dry.

On concrete surfaces, especially in ceilings and areas of significant development or use, substrate should be prepared with an adhesion primer (*REDUR AD 90*).

In applications on old substrates or in building rehabilitation operations we suggest prior consultation of our Technical Services.

b) Preparation of mixture

ISODUR ONE should be mixed in projection equipment with pre-mixing of the product.

In machines without automatic water dosing, mix *ISODUR ONE* in the proportion of 7,0 to 8,0 litres of water per 38l bag.

ISODUR ONE

SPRAYED THERMAL RENDER

c) Application

ISODUR ONE should be directly sprayed over substrates laying the mortar horizontally in overlapping lines from bottom to top. As soon as one layer is applied, it should be levelled by using appropriate metal levellers, working from bottom to top.

Once the total thickness has been properly levelled with a metal ruler, the render surface should be prepared. This process is carried out by using a cutting ruler or a spiked trowel in order to remove excess material, and so that the render surface becomes rough, promoting better adhesion of the levelling layer. This process should be carried out in the first 24 hours after the spraying is finished.

After preparing the surface of *ISODUR ONE*, there should be a 1 to 2 days waiting period per thickness centimetre before applying the final layer (weather conditions will be essential in determining the waiting time).

So as to minimize working joints, complete panels - whenever possible – should be executed. Working joints should be resumed within a maximum period of 12 hours.

d) Thicknesses

ISODUR ONE should be applied with total thicknesses between 20 and 100 mm. For thicknesses greater than 40 mm it is recommended to apply the thermal render in two layers of identical thicknesses separated by a time span of not less than 2 hours. The thickness of each sub layer should not exceed 4 cm. For total thicknesses greater than those mentioned, it is recommended to reinforce *ISODUR ONE* by incorporating an anti-alkali treated glass fibre mesh attached to the support with suitable fixations.

When applying *ISODUR ONE* on low-absorbent substrates such as concrete substrates, the initial *ISODUR ONE* layer should not exceed 2 cm thickness.

e) Restrictions

ISODUR ONE should not be applied at room and substrate temperatures below 5 °C and above 30 °C. Its curing time is 24 to 48 h per centimetre applied, and weather conditions will be essential in determining that cure.

In hot and/or dry weather or when substrates are directly exposed to sunlight, the substrate should be previously wetted and application should only be started when it is dry.

Application in the presence of strong winds may cause the cracking of *ISODUR ONE*. In such case, walls should be protected so as to minimize the effects of wind action.

f) Complementary Advices

The mixing water must be free of any impurities (clays, organic matter), and drinking water should be preferably used.

No mortar that has started its setting process should be applied. Do not soften mortars by adding water after preparation.

Do not add any other products to the mortar. *ISODUR ONE* should be applied as it is shown in its original packaging.

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5. PACKAGING AND VALIDITY

Packaging

38 l paper bags in plasticized pallets of 50 bags.

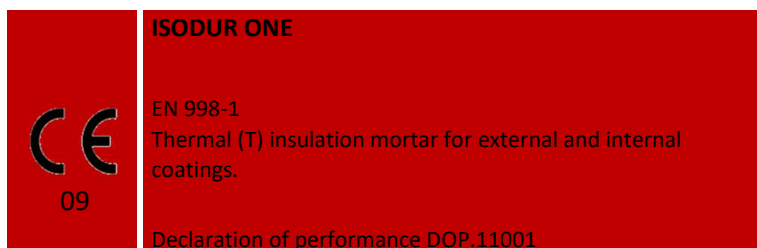
Validity

12 months provided the conditions of the original packaging remain unaltered and in good storage conditions, protected from extreme temperature and humidity.

6. HEALTH AND SAFETY

(DOES NOT REPLACE CONSULTATION OF THE PRODUCT SAFETY DATA SHEET)

- Irritating to eyes, respiratory system and skin;
- May cause sensitization in contact with skin;
- Do not breathe dust;
- Avoid contact with skin and eyes;
- If it comes in contact with eyes, rinse immediately and thoroughly with water and seek a specialist advice;
- Use protective clothing and appropriate gloves;
- Keep out of children's reach.



Being the conditions of applying our products out of our reach we do not take responsibility for its misuse. It is the customer's duty to verify the suitability of the product for the intended purpose. In any case, our responsibility is limited to the value of the goods supplied by us. The information contained in the present data sheet may be altered without prior notice. In case of doubt and if you need any further advice please contact our Technical Services.

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