

REDUR MULTI

MULTI-PURPOSE WATERPROOF MORTAR FOR INDOOR AND OUTDOOR USE

1. DESCRIPTION

REDUR MULTI is a multi-purpose dry mortar formulated from hydraulic binders, calcareous and siliceous aggregates, additives and water repellents, intended for the laying of masonry and for indoor and outdoor roughcast and rendering.

REDUR MULTI is a waterproof mortar for manual application.

2. FIELD OF USE

REDUR MULTI is especially designed for application on interior or exterior masonry wall panels made of ceramic brick, cement block and thermal block, with coatings.

REDUR MULTI is also suitable for single-layer roughcasting and rendering on interior and exterior wall and ceiling surfaces, allowing traditional types of finishes to be obtained, such as, medium sanded, trowelled and fine finished.

It may also be used on resistant stone masonry elements, although in these cases, it is advisable to consult our Technical Services beforehand, and it may be used as a support for certain types of coating applied by means of mechanical bonding or fixing systems. In this case, all the technical information on the materials selected should be known and our Technical Services should be consulted to assess the compatibility of the solution. *REDUR MULTI* may also be used as screed with thicknesses from 4 to 8 cm.

REDUR MULTI has the following advantages compared to the use of traditional mortars:

- Guaranteed use of a pre-dosed mortar with a constant formulation;
- Shrinkage cracking control of hydraulic mortars;
- Efficient waterproofing of wall panels;
- Reduced water absorption by capillarity;
- Use of a single product in coating and finishing walls.

When applied as rendering, *REDUR MULTI* should be applied over a roughcast or sprayed layer, carried out with the same product on concrete, or brick, block masonry or other cementitious substrates.

3. PRODUCT CHARACTERISTICS

Powdered product	Value	Standard
Aspect	Grey Powder	-
Granulometry	< 3,5 mm	-
Paste product	Value	Standard
Mixing water	12,5 ± 1,0 %	EN 1015-3
Hardened product	Value	Standard

Compressive strength (render)	CS IV	EN 998-1
Compressive strength (laying)	M 10	EN 998-2
Density	1650 ± 150 kg/m ³	EN 1015-10
Capillarity	W _c 2	EN 998-1
Water vapour permeability	μ 15/35	EN 12664
Elasticity module	13 GPa	-
Adhesion to block/brick	≥ 0,5 MPa	EN 998-1
Thermal conductivity	0,82 W.(m/K) (P=50%)	NP EN 1745

4. APPLICATION

a) Preparation of substrates

Substrates should be free of dust, release agents, loose or unstable material, efflorescence, as well as any material affecting the normal conditions of adhesion.

It must be ensured that the substrate or masonry element to be laid is in perfect adhesion conditions.

In hot or dry weather the masonry element and/or substrate should be saturated with water and application should begin when it is superficially dry.

When applied as a render, it is advisable to apply appropriate profiles to the edges, especially on building corners and door frames.

Before rendering, it is recommended to prepare the substrates by roughcasting or spraying by using **REDUR MULTI**.

For render applications on old substrates or in building rehabilitation operations, we suggest that you consult our technical services beforehand.

b) Preparation of the mixture

LAYING: **REDUR MULTI** should be mixed in an equipment with pre-mixing of the product. In machines without automatic water dosage, **REDUR MULTI** should be mixed in a proportion of 3,0 litres of water per 25 kg bag. In machines with automatic water dosing, set the minimum flow rate that allows good workability. Use water free of impurities and do not add any products to the mortar.

RENDER: **REDUR MULTI** should be mixed in an equipment with continuous mixing of the product. In machines without automatic water dosing, **REDUR MULTI** should be mixed at an average proportion of 3,0 litres of water per 25 kg bag. In machines with automatic water dosing, set the minimum flow rate that allows good workability.

c) Application

LAYING: When applying **REDUR MULTI**, traditional techniques should be followed with no special procedure or care, apart from the good application practices required.

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RENDER: *REDUR MULTI* should be applied manually, ensuring whenever possible the execution of complete panels. In case joints are needed, work should be resumed within a maximum period of 12 hours.

After applying the mortar, render should be properly tightened.

Rendering should be reinforced in areas of transition between different substrate materials, blinds' spaces, corners, door openings and slender panels, with anti-alkaline treated glass-fibre netting using *REDUR REDE 115*. Reinforcement meshes should be suitably embedded in the render thickness, so that their application should be carried out as follows:

- Apply at least 50 to 60% of the *REDUR MULTI* layer on the substrate;
- Suitably embed the reinforcement mesh in the layer applied;
- Apply the necessary mortar until the appropriate thickness is obtained, ensuring that the lower layer remains workable.

The existence of render expansion joints or fins should be provided, especially on façades facing south-west, with spacing appropriate to the normal functioning of the render.

In case of direct contact with the soil, waterproofing solutions should be provided in the starting zones of the covering so as to prevent its accelerated ageing with *HIDROSTOP FLEX*.

The final surface of *REDUR MULTI* should be trowelled to receive fine finish elements. The subsequent execution of the sponging technique allows the fine sanded finish to be obtained.

After a recommended drying period of 28 days, *REDUR MULTI* should quickly receive a suitable painting scheme.

d) Render thicknesses

When applying *REDUR MULTI*, a minimum total thickness of 1 cm should be ensured so as to guarantee the normal operation of the render. In special cases, namely in areas of significant humidity and wind exposure, it is advisable to apply a total thickness of at least 1,5 cm.

In order to avoid cracking due to slipping of the mortar, layers thicker than 2 cm should not be applied.

Whenever it becomes necessary to apply thicknesses greater than 2 cm, this should be achieved by applying successive layers where the following indications should be observed:

- Apply thicknesses of more than 1 cm and less than 2 cm;
- The different layers should have identical thicknesses;
- The 2nd layer should be applied once the first layer has set (application interval between 12 and 24 hours depending on the weather conditions);
- In thicknesses greater than 2 cm, layers should be reinforced with fibreglass reinforcement meshes, with anti-alkaline treatment, *REDUR REDE 115*.

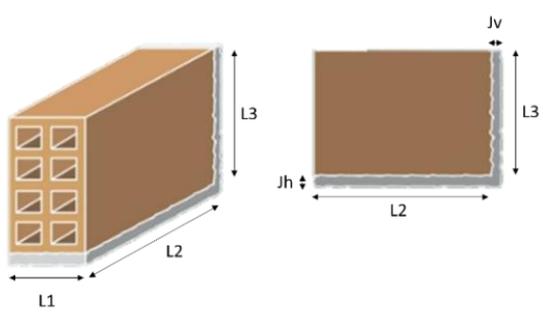
e) Restrictions

REDUR MULTI should not be applied at ambient and substrate temperatures below 5 °C and above 30 °C. It has a curing time of 28 days.

In hot and/or dry weather, or in the case of substrates exposed to the direct action of the sunlight, the surfaces should be watered every day for a week so as to keep the render permanently damp.

The application on render and in the presence of strong winds may cause cracking. In this case, protect the walls to minimise the effects of wind.

f) Theoretical Consumption

THEORETICAL CONSUMPTION							
LAYING	ELEMENT (cm)	THICKNESS OF JOINTS (mm)			Manual calculation		
		10	15	20			
kg/m ²	Ceramic brick	30x20x7	10,6	15,4	19,9	$V (m^3) = \{[(1,00 - n \times (L2 \times L3))] \times L1\} \times 10\%$  <p>L1 - brick thickness L2 - brick width L3 - brick height Jh - horizontal joint Jv - vertical joint 10% - Mortar waste</p>	
		30x20x11	16,6	24,2	31,3		
		30x20x15	22,6	32,9	42,7		
		30x20x22	33,2	48,3	62,6		
	Concrete Block SECIL PREBETÃO	50x20x10	12,8	18,6	24,2		
		50x20x15	19,1	28	36,3		
		50x20x20	25,5	37,3	48,5		
		50x20x27	34,5	50,3	65,4		
		RENDER					15 kg/m ² /cm thickness

g) Complementary Advices

- The mixing water should 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 after preparation; Do not add any other products to the mortar. **REDUR MULTI** should be applied as it is shown in its original packaging.

5. PACKAGING AND VALIDITY

Packaging

Paper bags of 25 kg in plasticized pallets of 60 bags.

Validity

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

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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 breath 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.

	<p>REDUR MULTI</p> <p>EN 998-2 Formulation mortar prescribed for general use (G). For use in masonry laying (with coating)</p> <p>Declaration of performance DOP.02023A</p>	<p>REDUR MULTI</p> <p>EN 998-1 General purpose mortar (GP) for interior and exterior coatings</p> <p>Declaration of performance DOP.02023R</p>
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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 Service.

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