

Malta refrattaria

Malta Refrattaria is a ready-to-use, single-component mortar resistant to high temperatures and thermal shock, consisting of aluminous binder and silica sands.



TROWEL
APPLICATION



FOR
INDOOR AND
OUTDOOR
USE



SINGLE-COMPONENT
PRODUCT



RECYCLING
CATEGORY R5



READY-TO-USE



SiO₂
60
SILICEOUS
AGGREGATES



Use this QR code for further details on application modalities, safety sheet and other information.



Product code

MINIPACK 5kg



Technical characteristics

Type of mortar UNI EN 998 -1	Refractory Mortar	Flexural strength UNI EN 196-1	5.0 MPa
Minimum thickness	5 mm	Cured product density UNI EN 1015-10	1850 kg/m³
Theoretical consumption (per cm of thickness)	14 - 16 kg/m²	Maximum operating temperature	900 °C
Compressive strength UNI EN 196 - 1	20.0 MPa		

Description

Refractory mortar based on aluminous cement, siliceous aggregates, manually applied for the fixing and sealing of refractory elements, suitable for use in high temperature environments (900 °C). The use of siliceous aggregates and the special design of the mixtures enable high thermal and

mechanical shock resistance values to be achieved. In its plastic phase, the product is easily workable and mouldable, with excellent thixotropy and controlled shrinkage.

Physical characteristics

	Minipack 5 kg
Consistency	powder
Apparent density	1550 kg/m ³
Mixing water	20 - 22%
Specific weight of fresh mortar UNI EN 1015-6	1800 kg/m ³

Maximum aggregate size	≤ 0.5 mm
Workability time	1 h
Pot life	1 h
Operating temperature	+5 °C/+35 °C
Storage	12 months in unopened packages protected from moisture

Fields of application

Specific mortar for assembling and grouting refractory bricks and materials subject to contact with direct flame or in the presence of very high temperatures, up to 900°C. Suitable for making: fireplaces, domestic ovens, barbecues, flues, civil and industrial ovens. It can be used both as bedding mortar in the construction of new artefacts, and as

jointing in existing works. It withstands extremely high operating temperatures. Ideal in the construction and assembly of new works. Specific for grouting existing joints. Suitable for construction and industrial applications.

Substrate preparation

The substrate must be homogeneous, strong, rough, clean and moist. Any traces of oil, grease, wax, etc. must be removed beforehand. Moisten the substrate before application and avoid water stagnation.

Blocks of refractory stones and bricks must first be immersed in water for at least 10 minutes before installation.

Product preparation

Mix Refractory Mortar with 20 - 22% clean water with a mixer at low speed until a homogeneous, lump-free mixture is obtained. The mixture should be made in such quantities as

to be laid in 30 to 40 minutes (setting start time of the product).

Application

Lay a continuous bed of mortar horizontally, then lay the wall elements on the fresh mortar, checking the alignment. Vertical joints must always be filled with mortar, unless otherwise prescribed by the manufacturer of the brick used. When the element is laid, the mortar must come out slightly from the

joints to ensure complete filling. Excess mortar must be scraped off before hardening; any unevenness in the masonry must be levelled off with mortar and shards in order not to create problems with differing thicknesses.

Advantages

Silica aggregates

Malta Refrattaria consists of silica sand grains with excellent thermal inertia and dimensional stability. The aggregate is totally free of organic impurities and other oxides that could react chemically with combustion products, causing rapid deterioration. Its physical characteristics are high hardness, low reactivity to acid attack and above all low water absorption.

This value results in a product that is easily workable even with small amounts of mixing water, offering less shrinkage and superior mechanical properties. This leads to greater durability of the work. Careful attention to the particle size curve also enables an optimum level of breathability of the hardened product.

Refractory binder

Malata Refrattaria consists of normal-setting but quick-hardening aluminous cements with exceptional high-temperature resistance. This binder is mainly composed of monocalcium aluminate obtained by firing a mixture of limestone and bauxite. When mixed with water, hydration produces hydrated calcium aluminate.

The final performance is characterised by high mechanical strength, excellent resistance to thermal shock, low tendency to expansion and cracking. When subjected to heat, refractory mortar slowly and continuously releases the water of hydration, absorbed during hardening, without changes in structure.

Specification item

Mortar for fixing and sealing refractory elements for high-temperature environments (up to 900°C) based on aluminous cement and siliceous aggregates, to be mixed with water only, such as Malta Refrattaria by Tradimalt S.p.A.

Consumption 14-16 kg/m² per cm of thickness.
Compression resistance at 28 days 20.0 MPa



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Raw materials contained in the product

Selected raw materials:

- Mix of aggregates with a high concentration of silica, with high hardness and low water absorption;
- Aluminous cements, consisting of calcium aluminates that

provide special acceleration and chemical resistance characteristics (>15%).
End-of-life recyclable product.

Warnings

- Do not apply on frozen or thawing substrates;
- Do not apply at high temperatures;
- Do not apply on absorbent substrates unless previously treated;
- Always soak until saturated the day before application;
- Do not apply on non-homogeneous substrates unless appropriately prepared;
- Do not apply on gypsum substrates;
- Do not apply on loose or crumbling substrates;
- Application temperature +5 °C and + 35 °C;
- Store the product in its undamaged packaging and protected from moisture for up to 12 months.

The technical-practical information contained in the technical data sheet is the result of our most accurate and detailed scientific research and experience in the field. However, since we cannot directly influence the site conditions and the execution of the work, this information is to be considered non-binding and therefore not legally or otherwise mandatory for third parties. This information does not exempt the end user from their responsibility to test our products in order to ascertain their suitability for the intended use. We therefore strongly advise the customer/applicator to carry out the appropriate preventive tests of Tradimalt products so that their suitability can be ascertained.