

TECHNICAL INFORMATION SHEET

STONE REPAIR – MORTAR FOR NATURAL MINERAL RESTORATION



DESCRIPTION & USE

A complete mineral repair mortar, composed of two parts; ground / crushed stone (powder) and a mineral binder (liquid). Restorative Stone Repair has the following characteristics:

- Excellent imitation of the existing stone, both in colour and texture
- Shrink free curing (unlike hydraulic systems)
- Frost resistant
- Water permeable
- UV-resistant and aging as natural, colourfast
- Easy handling, even in large sizes
- Good adhesion and tension-free

APPLICATION

USE: Restoration of medium grain natural stone (excluding marble, granite), brick and terracotta. The most common stone colours are available from 'stock' but customised mixes also provided. The rapid binding properties enable close detail to be achieved. Fully cured/hardened repairs with Restorative Stone Repair can be treated and worked as the original stone.

SUB-SURFACE: All loose material must be removed, the adhesion surfaces of the stone requiring repair must be hard, clean and dry. Cut out the damaged area, leaving a square cut edge of depth 10mm. If extensive large reconstructive repairs are required, mechanical anchors, stainless steel bolts or screws and stainless steel wire should be interconnected between the fixings.

PRIOR TO APPLICATION: Dampen the surfaces in contact with the repair with the Liquid component of Restorative Stone Repair.

CREATING THE MORTAR

MIXING: Mix the 2 parts of Restorative Stone Repair (Powder & Liquid) to a thick but workable paste (approx 3 parts powder and 1 part liquid, by volume, 4:1 by weight). As the product is rapid hardening, mix small quantities at a time.

APPLICATION: Push the paste firmly and briskly into location to a depth approximately 1mm greater than that final requirement. Approximately 10 minutes after placement the product should be cured/hardened sufficiently to use a trowel to work the surface to obtain approximately the desired profile.

FINISHING: After several hours, the repair will have cured/hardened enough to allow it to be worked with stonemasonry/sculptural tools, the repair can even be chiselled or planned in the same way as natural stone to match the repair product to the original surface finish.

NOTE: Despite a quick hardening the repair will appear damp for a considerable period after, giving it a slightly darker appearance than the surrounding surface, which is only temporary. After complete drying and tooling, the repair should then fully match the repaired surface.

CONSUMPTION: 1cm thickness of 1m² requires 20kg of material.

WARNING: Restorative Stone Repair is not suitable for concrete repair or for areas of high attrition such as stair treads. The product should only be used when the ambient temperature is between 10° & 30°C. The minimum thickness for application is 5 mm. Do not allow iron objects to contact the material as rust staining may occur. Colour corrections can be obtained by adding pigment to the powder component. Once hardening has taken place – Do not add more liquid.

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Density:	2.03 to 2.22 kg / dm ³
Adhesion (depending on type of stone, average):	0.6 N / mm ²
Dynamic modulus (after 28 days) according to NBN B15-229	
Fine grain:	15 000 N / mm ²
Coarse grain:	24 000 N / mm ²
Static elasticity modulus (after 28 days) according to NBN B15-203	
Fine grain:	8300 N / mm ²
Coarse grain:	16 200 N / mm ²
Curing Shrinkage:	zero (<0.001%)
Tensile and compressive strength according to NBN B12-208:	3 to 4 N / mm ²
Resistance to compression:	6.4 (fine grain) to 12.5 (gross) N / mm ²
Porosity:	24.9 to 27.4%
Water absorption coefficient :	0.84 to 0.86
Thermal expansion coefficient :	8.35 to 8.76 µm / m ° C
GC Factor:	<-2.52 (Class 5)
Workability time after mixing:	5 min at 15 ° C
Finishing time:	after 24 hours
Dosage:	2.5 volumes of powder mixed with 1 volume of liquid
Frost resistance:	very good, no damage
Storage Period:	2 years in dry conditions



In addition to the existing standard stone types a number of other special varieties can be supplied if necessary to create other custom natural stones, colouring should be done on the spot. Only use Restorative Stone Repair toners/mineral pigments.

CLEANING TOOLS: Clean tools with water before the mortar has cured

SAFETY: Refer to HSDS sheets

PACKING: Powder – bag or tub
Liquid – polythene jerry-can

TEST REPORT: KUL-Lab Reyntjens: 1992, test report n ° PV R/27209F/92
KUL-Lab Reyntjens: 1995, test report n ° PV R/28207/95