

DISPERSED HYDRATED LIME INJECTION MORTAR (DHL-IM)

Product Data Sheet

Product Highlights

DHL-IM is an injection mortar ready to use made of dispersed hydrated lime putty and filler. It is free flowing in suspension while stable in sedimentation and forms a homogenous zone bridging over capillaries in cavities. DHL-IM is designed to repair cavities and cracks no larger than 1/8 inch in width.

It is suitable for use in stone conservation as well as the preservation of wall paintings, frescos, statues and plaster. Furthermore, it is characterized by excellent workability, with a low degree of shrinkage and a high degree of adhesive capacity.

DHL-IM adheres and bonds to the substrate as a carbonate. The material does not contain any latex modifiers, accelerators, or acrylic bonding agents. The range of its physical and mechanical properties is so great that DHL-IM may be individually adapted to each building and each requirement.

Composition

DHL-IM is composed of dispersed hydrated lime putty, marble powders, mixing water and dispersing aids (<0.4%weight).

Product Data

Ratio of solid to liquid (weight): 3:1
Ratio of binding agents to aggregates (vol): 1:4
Density: app. 2.6 grams/ccm
Viscosity: 1.500-2.000 mPas
Special surface (calculated): 240-270 cm²/g
Total pore volume: 0.25-0.27 cm³/g

Properties

Compressive strength: 3.0 - 4,5 N/mm²
Surface adhesive tensile strength: 0.15 - 0.35

N/mm²

Water absorption 24h (weight %): 12 – 15

Shrinkage (vol%): 0 - 0.6

Freeze-thaw cycle losses (DIN): 0,2 – 0,8% weight

Losses after salt blasting test (DIN): 15-38% weight

E-module 1.500 – 2.000 N/mm²

Application Procedures

DHL-IM is placed by means of a packer or injection tool after pre-wetting with distilled water. Usual used syringe size 0,08-0,25mm. DHL-IM may be diluted with water up to 5% by weight in order to penetrate smaller cracks and voids.



When diluted it may be also brushed on fine hairline cracks. It is not necessary to subsequently wet the areas injected. Air and object temperature should not drop below 42°F and exceed 120°F.

No working time (non-hydraulic binder), to prevent from drying the container should remain closed. DHL-IM is manufactured in Germany.