## Lithomex
## Brick and Stone Repair Material

Lithomex is a specially formulated repair mortar based on Pure Natural Hydraulic Lime and aggregates for the repair or simulation of masonry, brick or stone. Lithomex is a neutral white or custom colored mortar supplied in 55 lbs. (25kg) bags to which mixing water is added. It is also available in units of 3 lbs or 15 lbs containers for smaller orders.

### Benefits:
Lithomex's unique qualities allow it to be tooled, shaped and carved even weeks after the final set has taken place. This affords sufficient time to achieve the very highest standard of work with the best quality reproduction. For surface repairs to be successful the materials employed need to have certain characteristics. They should:

- Have characteristics similar to the host masonry.
- Have adequate bond strength.
- Have a good modulus of elasticity.
- Be vapor permeable.
- Be durable.
- Be capable of being dressed with similar tools to the original masonry.
- Remain workable long enough to allow details to be fashioned.
- Match in color and texture.
- Absorb water sufficiently in wetting and drying periods to match adjacent masonry.
- They must always be reversible.

### Mixing:
Can be mixed manually or mechanically in a typical mortar mixer or with a whisk, adding approximately 1.1 gals water per 55 lbs bag of Lithomex used. For smaller batches mix approximately 64 Milliliters of water to one dry cup of Lithomex. Mix well for 3-5 minutes. Adjust final water content carefully to consistency required.* For small quantities mixed by hand, add just sufficient water to make a semi dry crumbly consistency, beat vigorously for a few minutes and carefully add a few drops of water at a time until desired consistency is achieved. (8 oz water to 3lbs Lithomex)

*The addition of too much or too little water can alter colored Lithomex. It is recommended to use a consistent amount of water to ensure color consistency between batches.*

### Application:
The application surface must be clean, free from dust and oils. On porous surfaces, ensure that pre-wetting the surface controls suction and apply Lithomex before this is fully dry. Never apply to surfaces that are over saturated or have standing water. Lithomex can also be applied on metal lath. For application on dense impervious materials, please consult us. The minimum thickness is 3/16" (5mm) (can be dressed or cut back to a feather edge when set). For projection / molded work, greater than 4" (100mm) it may be necessary to pin and dowel. Applied in thin layers it can be built out to 4" (100mm) over a working day. Applied in layers of up to 2" (50mm) in one pass. Lithomex is suitable for all types of casting. Always dampen application areas. The mortar should be well pressed back in place. If necessary, re-compact by pressing after a couple of hours to suppress any slight shrinkage. Support where necessary with wires, anchorage, stainless steel fixings or forms, etc. Simulation of stone / brick features, rough finishes, false joints etc. can be made approximately 5 hours from application (in damp cold weather up to 24 hours). Shaping and forming of details can be carried out for up to 2 – 3 days after placing by scraping to profile or level with metal tools, such as the edge of a trowel or steel float, however, most shaping and finishing work can be done within 24 hours. Fine

finishes are achieved either by troweling at time of initial setting or by fine sand paper after the material is sufficiently hard (usually 7 days) Carving, using appropriate tools, requires waiting up to a week or more depending on the weather conditions. Where ashlar masonry or very finely jointed masonry has had considerable damage to the arises, flush finishing in Lithomex with a false struck joint is the ideal solution. If building details are damaged and require repair prior to the façade being lime washed or painted, Lithomex will readily accept lime washes and paints. On plastered areas Lithomex can be used to form decorative stone or brick features such as moldings and cornices.

**Environmental Requirements:**
Materials must be stored and handled to protect them from damage and moisture in accordance with Manufacturer's instructions. It is recommended to take precautionary measures necessary to assure that excessive temperature changes do not occur. Do not apply patching mortar unless minimum ambient temperature of 45 degrees F and a maximum of 85 degrees F has been and continues to be maintained for a minimum of 48 hours prior to application and until Lithomex has cured. During hot weather Protect from uneven and excessive evaporation during the dry, hot weather. It is suggested to provide tarping over the outside of all scaffolding.

**Technical Data:**

| Bulk Density | Lbs./cu ft : 82.5 to 85 |
|---|---|
| Granulometry | From #23 to #200 |
| Consumption | 4.7 to 5 lbs. per sq. yd. Per 1/16" of thickness |

Setting time (in water with no surcharge):
start – 1h30min / end – 2h30min. Tests on paste (water addition 18.7%)

Tests on Hardened Mortar (water addition at 18.7%)

| Capillarity | 2.06 gr.cm$^2$. $\sqrt{2}$ | Low | Tested at 28 days |
|---|---|---|---|
| Water permeability | 0.25 ml.m.day | Low | Tested at 28 days |
| Vapor permeability | 0.75 gr.m$^2$.hour.mmHg | Very High | Tested at 28 days |

| | 7 Days | 28 Days |
|---|---|---|
| Tensile strength | 319 psi | 345 psi |
| Compressive strength | 900 psi | 1051 psi |
| Elasticity moduli | | 1115 ksi 7690 Mpa |
| Shrinkage | 0.081% mm.m | 0.085% mm.m |

*The above details are given for information purposes only. Final dosages and application should be checked with our technicians. The Factory reserves the right to alter specifications.*

Lithomex is not suitable for step or tread repairs. For step and thread repairs Litholiant is a powder to with aggregates similar to the original stone is added. This will make a material suitably robust for aggressive wear conditions.

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