

Heritage Building Restoration

# THE LANGUAGE OF LIME

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## Lime Industries Lime Putty

# 5 KEY FEATURES

### 1 Superior Water Retention

Lime Putty has excellent water retentivity. Our process of soaking and the rapid ageing process in excess water ensures that hydration of the burnt lime is fully completed, hence reducing moisture take up. Water retention is necessary to prevent stiffening or premature drying of mortar. Mortars high in cement tend to bleed and lose moisture rapidly, this lead to a poor bond between the masonry unit and the mortar itself.

### 2 Maximised Bond Strength

Lime in mortar improves the bond. A high lime mortar squeezes into irregularities in the brick face establishing an intimate, continuous bond. A nailing or interlocking action takes place when the lime is sucked into the pores of the brick, forming a strong, permanent adhesive. Straight or high cement mortars yield poor bonds because they shrink away from the brick face leaving the mortar in the form of a slate or biscuit when separated from the masonry unit.

### 3 Enduring Compressive Strength

Lime mortars provide levels of compressive strength which are well balanced for heritage restoration applications and provide enduring bond strength. High lime mortars possess compressive strengths which continue to gain in strength over time. The key to mortar is just not strength but also the ability to maintain elasticity and flexibility to minimise brittleness.

### 4 Unique Autogenous Healing

Only lime has the capacity for autogenous healing. Lime imparts to hardened mortar the property of self healing. This is the closing up or re-knitting of hairline cracks that can develop in masonry. By re-carbonating, lime mortar has the ability to plug openings with the crack being filled by the formation of micronic stalactites.

### 5 Increased Weather Resistance

Lime mortar provides a weather tight finish with maximum adhesion and elasticity. Lime mortars have excellent resistance to the ravages of wind and rain and have proven results in durability.

Lime Industries has proven experience in lime and their knowledge is extensive across all areas of building and construction, including pre and post 1930's buildings. The company has developed a Lime Putty that is high in quality, easy to use, easy to work with and is ideal for use in historic building restoration works.

Lime Industries is the only Quality Endorsed Company producing Lime Putty in Australia and the company takes pride in the fact that its products have been used by the building industry for over 30 years. Lime Industries Lime Putty is ready to use high quality lime putty packed in convenient weatherproof polythene 20 litre bags. Lime Putty can be made available to you anywhere in Australia, at competitive prices.

Trade Talk

# HERITAGE BUILDING RESTORATION

Virtually every masonry structure built before 1930 was constructed using lime mortar. This type of mortar was soft, flexible and self healing. The mortar could tolerate some structural movement.

For this reason, mortars designed for heritage restoration works should be softer than the masonry units and no harder than the historic mortar in order to prevent irreversible damage. Stresses caused by mortars which are too hard can break the bond between the masonry units and the mortar; they can also cause cracking and spalling of the units themselves.

The original lime putty mortars were water vapour permeable. The mortar allowed a masonry structure to breathe by releasing and absorbing moisture without damage. It is for this very reason that under no circumstance should additives, coatings or sealers be used on heritage restoration works. These products coat the surface of the mortar and prevent the mix from breathing. The recommended and authentic way of coating an old masonry surface is either through lime washing or by applying a lime mortar render.

## **Why should I use a Lime Industries lime putty mortar mix instead of a cement-based mortar for restoration work?**

Apart from maintaining authenticity, lime putty mortars provide many distinct advantages over common cement based mixes. Lime mortars have stood the test of time. The durability of constructions such as the pyramids of Egypt or the Great Wall of China attest to this. Lime mortar has many benefits and can be used for bricklaying, rendering and lime washing.



## **How to make lime mortar**

Mix 2–3 parts sand  
with 1 part lime putty  
by volume