

## **Lime wash & Shelter Coat**

### **General**

Traditionally lime wash was the principal finish applied externally and internally to historic buildings, quite often applied directly to the masonry or brickwork and more commonly to pre-applied lime coatings (i.e., harling, plaster, render etc.,). Although often thought of as a decorative coating, the lime wash was first of all a protective layer to the lime coatings and masonry substrate. On new lime renders and plasters it unifies and protects the surface particularly while strength is developing within the new plaster.

As with all lime coatings, lime wash is a breathable coating allowing evaporation of moisture and water vapour. Lime wash is also a repairing material, being used to fill small shrinkage cracks on the lime coverings.

Lime wash can also be used in conjunction with various aggregates to make Shelter Coats for friable masonry and will act as a sacrificial protective coat. The addition of fine silica sands or marble dust will give an added durability to the lime wash that cannot be achieved with lime binder alone. Shelter coats are applied with a brush but should be treated as a thin-coat lime plaster with the same precautions taken with regards to suction control of the background, understanding the curing process and aftercare and protection. Shelter coats can be comprised of Non-Hydraulic Lime Putty binder or Natural Hydraulic Lime binder, or a mix of each. Shelter coats can be tinted in much

#### Disclaimer

Although we have taken great care to ensure that this information and advice is correct, we respectfully suggest that you take further advice to take into account site specific conditions. Therefore, we cannot accept any responsibility for any loss or damage in carrying out work using these guidelines.

the same way as lime wash. The thickness of a standard shelter coat is normally the equivalent of c. 2-3 coats of standard lime wash. Shelter coats are a good intermediary coat between Natural Hydraulic Lime render and Non-Hydraulic Lime Putty based lime wash.

### **Plain Lime wash**

Plain un-coloured lime wash will take on the colour of the lime used; this can range from pure white through to grey or buff coloured.

### **Coloured Lime wash & additives**

Generally earth pigments were used to colour the lime washes, most commonly ochre's, but also sienna's and umbers, which produced a range of yellows, reds and oranges. Broadly speaking these produced pastel shades, although deeper colours are not uncommon. Coal dust, ash, blood and ground stone dust have all been found as additives in historic lime washes to achieve the desired colour. Other additives such as Tallow, Linseed Oil or other binders can be added to lime wash if desired but caution should be used when adding any ingredients as while, for example, some durability may be gained with the addition of Linseed Oil or Tallow, some breathability is lost.

## **Application of Lime wash**

### **Preparation**

Surfaces to be lime washed must be clean, free from grease and they must be porous. Previously lime washed surfaces must be well brushed down and any loose lime wash scrapped off. Any mould should be treated with fungicide and thoroughly washed off with clean water. Do not use fungicides, which contain silicon.

#### Disclaimer

Although we have taken great care to ensure that this information and advice is correct, we respectfully suggest that you take further advice to take into account site specific conditions. Therefore, we cannot accept any responsibility for any loss or damage in carrying out work using these guidelines.

Where lime wash is to be applied to a smooth or dense background, the addition of a small amount of fine aggregate in the first coat will aid adhesion to the background.

### **Damping Down**

Lime wash should never be applied to a dry surface, as this will cause rapid drying out of the lime wash and result in dusting. Spray about 3 sq/m of the surface to be lime washed with water until the surface is damp but not running with water. Do not try to damp down the whole wall or ceiling at one time, as most of the area will be dry before it can be lime washed. Dry joints must be avoided as these will result in the lime wash gaining a patchwork appearance.

### **Application**

Lime wash is best applied by using a flat brush or masonry paintbrush. Stir the lime wash well before and during application, apply working the wash well into the surface. The lime wash should be applied in several thin coats. Avoid runs or drips running down the face of the work.

The lime wash will appear transparent when first applied so care must be taken not to build up the lime wash too quickly as this will craze on drying. Each coat should be allowed to dry before the next coat is applied. We recommend 24 hours between coats. It is very important to rewet the previous coat before applying the next coat. At least 4 coats will be needed to cover new work.

Each wall or ceiling should be worked on until each coat is completed, as day joints will be visible.

#### Disclaimer

Although we have taken great care to ensure that this information and advice is correct, we respectfully suggest that you take further advice to take into account site specific conditions. Therefore, we cannot accept any responsibility for any loss or damage in carrying out work using these guidelines.

Each coat will need to be burnished into the surface with a dry brush as it starts to 'gel'. This will give a surface free from brush strokes and leave a unified finish.

As earth pigments are a natural product slight variations in colour do occur. We highly recommend when ordering coloured lime wash order the whole amount required plus 15%, this should then be mixed together in a large container and will avoid variation in colour over the job.

### **Common Mistakes and Solutions;**

Lime wash dry but powdery: Dried too fast, spray with water and recoat with lime wash.

Lime wash not absorbed: Unsuitable non-porous surface remove and use alternative product.

Lime wash patchy Insufficiently mixed, mix following coat thoroughly.

Lime wash dries too quickly: Remove flaky lime wash and damp down the background.

**IT IS VERY IMPORTANT THAT NEW LIMEWASH IS PROTECTED FROM FROST FOR A NUMBER OF WEEKS AFTER APPLICATION. NEW LIMEWASHES THAT BECOME SATURATED WITH WATER AND THEN EXPOSED TO FREEZING CONDITIONS ARE EXTREMELY VULNERABLE TO FROST DAMAGE.**

4

#### Disclaimer

Although we have taken great care to ensure that this information and advice is correct, we respectfully suggest that you take further advice to take into account site specific conditions. Therefore, we cannot accept any responsibility for any loss or damage in carrying out work using these guidelines.