Ironstone
Mortars
Caring for your older building
Natural Breathable Sustainable Durable

# Ironstone Bonding Coat Data Sheet

**Product**
A dry ready mixed Natural Hydraulic Lime Render with a coarse texture, suitable as a bonding / slurry coat.
Mix Ratio – 1:2
Binder Strength – Heidelberg Materials NHL 3.5
Aggregate 5mm down sharp flint sand

Factory blended using graded kiln dried sand and Heidelberg Materials Natural Hydraulic Lime binder. Combined with carefully selected additives to improve the renders physical and mechanical properties, whilst maintaining all the virtues of a pure Natural Hydraulic Lime render.

**Usage**
Suitable for applications externally and internally in building conservation where the binder strength is appropriate for the host background / surface. Designed for challenging backgrounds as a coarse bonding coat. If masonry walls are very smooth or highly porous, then a standard lime basecoat may have difficulty sticking to the surface. Ironstone Bonding coat will prepare such surfaces ready for the next coat of lime render or lime plaster.

**Coverage**
After mixing, a 25kg bag will produce approximately 15 litres of mortar. A single 25kg bag will cover 2.8m2 at 5mm thickness onto a flat wall.

**Advantages**
- Quality controlled production
- Consistency of mix ratio
- Significantly improved workability and reduced risk of shrinkage
- Increased water retention for improved cure
- extended working and finishing time

**Colours**
This product is entirely natural. The Ironstone Bonding coat is made with a 5mm down tan flint sand, this gives a natural buff colour.

**Surface Preparation**
Dense impervious backgrounds will require little to no dampening, whereas very porous backgrounds will require adequate dampening to prevent rapid drying.

Ensure surfaces are clean and free of dust and other debris.

**How to Mix**
A 25kg bag of mortar will require 4 to 6 litres of clean water. Always avoid making the mix too wet, as this can promote shrinkage issues.

First add around 80% of the water followed by the Ironstone Bonding coat and mix until the water is fully distributed, then add additional water to the desired consistency. Mix for 5 – 10 minutes. Ironstone mortars may be re-worked for up to 12hrs.

Whisk mixers are also suitable for use.

Like most lime renders and plasters this blend will benefit from quenching. Allow the mix to stand for 10 to 20 minutes after mixing before use.

**How to Apply**
Bonding coat should be applied with either a Sablon gun type sprayer, harling trowel or masonry brush at quite a wet consistency to keep it thin. Apply the lime on to the surface and joints, finishing with horizontal brush strokes to create a slurry texture. The target thickness should be 3-5mm with a high textured finish.

**Curing and Why**
Natural Hydraulic Lime (NHL) mortars do not set as quickly as modern cement-based products. NHL starts to set once water is added and hardens by reacting with carbon dioxide which is a slow process.

The Ironstone Bonding coat should be left for 3 days to build up strength before application of an Ironstone Basecoat. In warm weather gently mist spray with water after application and cover if required with damp hessian. In cold weather, cover fresh mortar with protective layers of hessian to help avoid frost damage.

**Packaging**
Available in 25kg polythene lined paper bags or sealed one tonne bulk bags. The paper used is suitable for recycling.

## Storage

This product should be stored in dry conditions, in unopened bags and clear from the ground. Reseal part bags after opening if unused product present. Use within 6 months of manufacturing date (provided on each bag).

## Performance

| Test | Performance |
|---|---|
| Compressive strength Nmm2 | 3.21 |
| Fresh Mortar Density Kg/m3 | 1836.16 |
| Water Absorption Kg/m2 | 1.66 |
| Flexural Strength Nmm2 | .46 |
| Water Addition Rate ml per 1kg | 171.03 |
| Dried Mortar Density Kg/m3 | 1794.4 |
| Air Entrainment % | 4.33 |

## Health and Safety

| Risk Phrases | Safety Phrases |
|---|---|
| R36/37/38 Irritating to eyes, respiratory system and skin | S22 Do not breathe dust |
| R43 Contact with wet mortar may cause irritation, dermatitis and/or burns | S26 In case contact with eyes, rinse immediately with plenty water and seek medical advice |
| R66 Repeated exposure may cause skin dryness and cracking | S24/25 Avoid contact with skin and eyes |
| | S36 Wear suitable protective clothing |