

Wintermix NHL3.5

Product Data Sheet

A dry ready mixed Natural Hydraulic Lime mortar for building, rendering & plastering.



Product Description

Factory blended mortar using graded kiln dried sand and St. Astier Natural Hydraulic Lime, combined with carefully selected additives to improve the mortar's physical and mechanical properties, whilst maintaining all of the virtues of a pure Natural Hydraulic Lime mortar.

Mix Ratio

2:5 as standard, other mix ratios available on request.

Binder

St Astier NHL3.5 gauged with a small quantity of pozzolan. Due to the small gauging of pozzolan we advise that this product should be treated more like an NHL5 strength mortar.

Aggregate

5mm down tan flint sharp sand. Other sands available on request.

Usage

Our Wintermix is suitable for building, pointing and coarse render coats. This recipe has been designed to achieve frost resistance in approximately 7 days with temperatures at 5°C along with a good protection & curing regime.

Suitable for applications in construction where the binder strength is appropriate for the host background or surface.

Do not use this product below 5°C, do not use this product if freezing conditions are predicted within the following few weeks unless adequate protection is in place (take note of wind chill). Do not use this product in temperatures above 30°C.

Coverage

After mixing, a 25kg bag will produce approximately 14.5 litres of mortar. For pointing applications; a single 25Kg bag will cover 1.5m² at 10mm depth of pointing. As joints are never completely even on-site trials will always give the best indication of yield for your specific project.

Advantages

- Quality controlled production and product consistency.
- Improved workability of mortar, extended working and finishing time and reduced risk of shrinkage.
- Increased water retention for improved cure.
- Less risk associated with winter working with binders not typically used in cold weather.

Colour and Texture

All of our standard mortars are entirely natural in colour. No pigments or colourants are added.

The standard Wintermix NHL3.5 is made with a 5mm down tan flint sand; this gives a naturally buff colour when finished with a textured face.

Please note that as sands come from a natural source there can be some variation in colour. While variances are slight, for applications where colour is important such as unpainted pointing, we strongly advise that each elevation is completed using mortar from the same batch.

Preparation

In general, this will be determined by the purpose and application of the mortar.

Dense impervious backgrounds/materials are unlikely to be very absorbent and require little to no dampening, whereas more absorbent backgrounds/materials require adequate dampening in order to prevent rapid drying.

Whilst this product includes additions to help mitigate shrinkage issues, best practice still needs to be followed.

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

Mixing

A 25kg bag of mortar will require 4 to 4.8 litres of clean potable water. Use this mix as stiff as feasibly possible, it needs to be workable but should be used stiffer than a sand and cement mortar.

As a dry mixed material, it is possible that some settlement or separation may occur in the bag during transit; when mixing part bags, it is especially important that the dry contents are thoroughly blended prior to mixing with water.

Best Practice/Advised Mixing: First add 80-90% water of the total water into the mixer, then turn the add the dry mortar and turn the mixer on. Allow the mortar to mix until the water is thoroughly distributed, then add additional water to achieve desired consistency. Add water slowly to prevent over-wetting of the mix.

Mixing Time: Mix for a minimum of 5 minutes, but for no longer than 10 minutes.

Once water has been added, this mortar has an open time of at least 14 hours. Longer in colder weather.

Manufactured by Cornerstone Mortars

Cornerstone products are CE marked and manufactured under an ISO9001:2015 accredited Factory Production Control System.

Supplied by Cornish Lime Ltd.

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Usage and Finishing

Areas Of Use: This blend is suitable as a multi-purpose product. NHL mortars prefer masonry with a degree of suction, so units like fine granite may be more difficult to bond to and take longer before being able to apply a finish.

Pointing: Removal of the previous mortar should be done in such a way as to give a good space and key for the fresh mortar to be applied. The depth should be no less than 10mm, and should be raked out to give angled corners in the back of the joint. Any dust and residual old mortar should be removed by way of a stiff bristled brush or by vacuum cleaner if a suitable industrial one with HEPA filters is available.

After cleaning out the joint it must be sufficiently dampened down to control suction, high suction backgrounds may need multiple passes to wet out sufficiently, and be prepared to keep wetting the wall as you work if particularly high suction or in hot/windy weather.

Point the mortar into the joint with an appropriately sized tool, the mortar should be pressed into the back of the joint as tightly as possible. After the mortar has started to stiffen from background suction it may shrink away from the edge of the masonry units a little bit; come back and re-press the mortar to close up those gaps.

After time has passed and the mortar stiffens even more, a tool should be used to drag across the face of the mortar to remove the fat from the front of the joint, the mortar should fall cleanly away from any metal tool without sticking when it's ready. Finally, the mortar should be beaten into the joint with a churn brush, this will help to compact the mortar into the joint.

Building: There are multiple building styles and methods so covering them in a short document like this is not feasible. This mortar is suitable for laying blocks, bricks or stonework. If the masonry is particularly high suction and/or the weather is quite hot then it may be advisable to dip it in water before laying so that the mortar doesn't dry back too quickly and allows enough time for placement and adjustment.

Rendering: Dub out the wall to bring it roughly flat by filling pockets, voids or missing pointing with a relatively stiff mix. After dubbing out a shallow scratch should be applied to any areas which have been filled, this will help create a key for the scratch coat to bond to. Allow 48 hours for this to stiffen sufficiently to take the scratch coat of render. Keep these areas damp by regular mist spraying until the scratch coat is ready to be applied.

The scratch coat should be applied at a target thickness of 10-12mm, this should be scratched using a cross-hatch pattern scratch to approximately 1/3 of the depth of the render. The more common 'wavy line' scratch used on modern sand and cement renders is not appropriate for this design of material. This coat should be left for a minimum of 7 days to build up in strength before application of a

float coat. During this period the render should be damp cured by mist spraying and protection from direct sunlight and drying winds, preferably with damp hessian sheeting.

The float coat should be applied at a target thickness of 8-10mm and should not be thicker than the scratch coat. The scratch coat may need mist spraying before application to control suction. This should be floated with a wooden or plastic float to compress the surface after application; lime renders should be stiffer than sand and cement at time of floating and should not drag under the float. Optionally this can then be sponged up after it's stiffened a little more to give a smoother surface if this is to be the final coat.

Packaging

This product is supplied in 25kg polythene lined paper bags, palletised for shipping and handling. The packaging is a mixed material and should be recycled accordingly.

Also available as tonne bags for 3 Tonne or higher order quantities.

Storage

This product should be stored in dry conditions, in unopened bags and clear from the ground. Always protect bags from water and damp. Reseal part bags after opening if unused product is present.

Use within 6 months of manufacturing date (provided on each bag).

Health and Safety

RISK PHRASES: R36 / R37 / R38 / R43

- Avoid contact with skin and eyes.
- Contact with wet mortar may cause irritation, dermatitis and/or burns.
- Contact between lime powder and body fluid (sweat, eye fluid etc.) may cause skin burns and respiratory irritation, dermatitis or burns.

SAFETY PHRASES: S2 / S24/25 / S26 / S37

- Avoid eye and skin contact by wearing suitable eye protection, protective clothing and gloves.
- Avoid breathing dust.
- Keep out of reach of children.
- On contact with skin and/or eyes, rinse immediately with clean water and seek medical attention.

Declaration

Cornerstone lime mortars, renders and plasters are manufactured to the requirements of BS EN 998-2: 2016 and BS EN 998-1: 2016 respectively.

This product will contain no Portland Cement whatsoever.

Document Control

Datasheet version 1.1, issued August 2022. More modern versions will supersede this datasheet, with no exclusions.

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