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Hydraulic Lime Render

Application Guide

The following is a general guide to using Kilsaran Hydraulic Lime Renders. Full recommendations on the use of renders are set out in EN 13914:2005 'Design, preparation and application of external rendering and internal plastering' and the Foresight Best Practice Guide (Donhead 2003)

Project Design (New Buildings)

The appropriate render finish should be factored into the overall design from the outset with the construction or renovation of buildings. Render coatings should be designed and applied in accordance with EN 13914:2005 'Design, preparation and application or external rendering and internal plastering'. It may also be useful to refer to data sheet 4 'Factory Produced Mortars for External Rendering' available for download from the Mortar Industry Association website.

The surface to be render finished should not have water running over the surface or dripping onto it, as this may cause damp patches, staining, or growth of moss and algae over time. Similarly the render should not travel to ground level which would allow damp to be drawn up by capillary action from the ground upwards. A separate plinth should be used at the base of the building façade. Guttering, downpipes and fascia and soffit must be designed, installed and maintained to ensure they keep streaming water off the rendered surface. Sills and copings should project from the wall and have a drip channel on the underside to prevent water from dripping onto the render.

Adequate expansion joints must be incorporated into all render finishes and must follow structural movement joints in the background masonry. See Cl. 6.13 of BS EN 13914-1:2005 for further guidance. Corners or angles are formed using PVC, stainless steel or galvanised steel bead, suitably and securely fixed to the backing material. Please note beads should not be fixed to the background using gypsum based plasters.

Preparation of Background

Kilsaran advise that an examination of the background surface is carried out to determine its suitability to receive our Hydraulic Lime Render. The following steps should be carried out before commencing work;

- Remove all dust, loose material, vegetation and possible contaminants from the background surface
- Fill all voids and recesses (including joints) with Kilsaran Hydraulic Lime Render, to create an even surface
- Insert broken stone or slate into the joints, as pinning's for wider joints do avoid wide expanses of mortar.
- Wet down high suction, porous joints and backgrounds with a mist to aid curing. Do not use excessive amounts of water
- As the mortar is setting, the joints should be compacted with a churn brush to open up a breathable face and provide a key.
- Junctions between different materials should be treated as per the recommendations of EN 13914-1:2005
- Allow sufficient time for mortars used in preparation of the background, to cure before application of render coats

Kilsaran Hydraulic Lime Renders are designed to be applied by both hand and machine application. When machine applied, to common backgrounds, our Hydraulic Lime Renders are suitable for application without a scud coat. Where render is to be hand applied or applied to low-suction smooth surfaces (such as mass concrete) a suitable scud coat should be applied prior to rendering in order to provide sufficient key. Kilsaran recommend the use a scud coat when our Hydraulic Lime Renders are applied by hand.

Scud Coat/ Stipple Coat

Kilsaran recommend the use of a scud coat when applying this product by hand or when applying to low or variable suction backgrounds. A 1:1.5 hydraulic lime scud must be applied to smooth, low-suction surfaces to provide a textured key for our Hydraulic Lime Render. Apply the scud coat to the background by throwing it from a short distance, ensuring complete and even coverage. Approximately 1-2 hours after its application, dampen down the scud with clean water. This will ensure adequate hydration of the lime. Allow the scud coat to dry and harden completely before applying Kilsaran Hydraulic Lime Render. Drying time is typically 2-3 days, but this is weather dependent. Alternatively a 1:1.5 stipple coat may be mixed to a creamy consistency and applied to the wall in a 3mm-4mm coat. Once applied, work the material into the background with a stiff churn brush to create a stipple and provide a key for follow on coats.

Get in Touch
IRELAND - **T:** +353 (0)1 802 6300 - **E:** technical@kilsaran.ie - **W:** www.kilsaran.ie
UK - **T:** +44 (0)161 872 8899 - **E:** technical@kilsaraninternational.co.uk - **W:** www.kilsaraninternational.co.uk

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Mixing of Material

Kilsaran Hydraulic Lime Renders should be mixed in a suitable site mixer, continuous mixer, or spray render machine. Clean water should be added at steady, constant rate to ensure mix consistency and uniformity of the finished coat. Typical water addition of 5.2-5.7 litres per 25 kilos of dry material will produce a light workable material. Mixing outputs vary and this will affect the quantity of water required.

Later additions of water are not permitted as this will have an adverse effect on the life and colour consistency of the product.

1st Undercoat

The first undercoat of Kilsaran Hydraulic Lime Render should be applied as follows;

- Dampen down the substrate with a fine mist immediately prior to application. Avoid saturating the surface
- Apply a 10mm coat of freshly mixed render to substrate and level using a straight edge or darby
- Key the surface with a plastering comb or grid float to provide a key or follow on coats
- Dampen the new coat with a fine water mist if necessary to aid the curing process
- Allow the undercoat to dry and cure for a minimum of 1 day per millimeter of render

2nd Undercoat

The second undercoat of Kilsaran Hydraulic Lime Render should be applied as follows;

- Dampen down the first under coat with a fine mist of water prior to application of the second undercoat
- Apply a 8mm-10mm coat of freshly mixed render to the substrate and level using a straight edge or darby
- Key the surface with a plastering comb or grid float to provide a key or follow on coats
- Dampen the new coat with a fine water mist if necessary to aid the curing process
- Allow the undercoat to dry and cure for a minimum of 1 day per millimeter of render

Finish Coat

The finish coat of Kilsaran Hydraulic Lime Render should be applied as follows;

- Dampen down the first under coat with a fine mist of water prior to application of the second undercoat
- Apply a 8mm coat of freshly mixed render to the substrate and level using a straight edge or darby
- Apply the desired finish with a sponge or wooden float
- Avoid over working the material as this can cause crazing and discoloration
- Dampen the new coat with a fine water mist throughout the day to avoid premature drying of the render surface and subsequent plastic shrinkage. This will also aid the curing process
- Protect the newly rendered surface from strong sunlight, wind and rain for a minimum of 10 days
- Allow the render surface to dry and cure naturally

Important

Do not apply Kilsaran Hydraulic Lime Render;

- To frozen, thawing or wet substrates
- To gypsum backgrounds
- In temperature lower than +5°C or higher than +30°C
- Where overnight temperatures are to fall below +5°C

The information in this product application guide serves as a guide only. Kilsaran advises that all users of the product must be suitably trained, experienced and competent in the use of Hydraulic Lime Renders and should satisfy themselves that they are familiar with best practice guides and current Irish, British and EN standards for rendering mortars. Kilsaran does not accept any liability for the incorrect use of the product or the workmanship of users.

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