



IRISH AGRÉMENT BOARD CERTIFICATE NO. 17/0393

Kilsaran International,
Piercetown, Dunboyne, Co. Meath, Ireland.
T: 01 802 6300
E: technical@kilsaran.ie
W: www.kilsaran.ie

Kilsaran KPRO Façade Rendering Systems

Enduit de Surface Oberflächenbeschichtung

NSAI Agrément (Irish Agrément Board) is designated by Government to issue European Technical Approvals.

NSAI Agrément Certificates establish proof that the certified products are '**proper materials**' suitable for their intended use under Irish site conditions, and in accordance with the **Building Regulations 1997 to 2019**.



PRODUCT DESCRIPTION:

This Certificate relates to Kilsaran KPRO Façade Rendering Systems, a range of rendering mortars developed by Kilsaran International to comply with IS EN 998-1^[1] and IS EN 15824^[2].

This Certificate certifies compliance with the requirements of the Building Regulations 1997 to 2019.

USE:

Kilsaran KPRO Façade Rendering Systems are designed principally for weatherproofing external vertical concrete block or brick masonry walls but the cementitious renders can also be used as an internal decorative render. Conditions for use on fair-faced concrete and high suction surfaces are detailed in Section 2.4.2 of this Certificate.

MANUFACTURE & MARKETING:

The products are manufactured and marketed by:

Kilsaran International,
Piercetown,
Dunboyne,
Co. Meath,
Ireland.

T: 01 802 6300

E: technical@kilsaran.ie

W: www.kilsaran.ie

1.1 ASSESSMENT

In the opinion of NSAI Agrément, Kilsaran KPRO Facade Rendering Systems if used in accordance with this Certificate can meet the requirements of the Building Regulations 1997 to 2019, as indicated in Section 1.2 of this Irish Agrément Certificate.

1.2 BUILDING REGULATIONS 1997 to 2019 REQUIREMENTS:

Part D – Materials and Workmanship

D3 – Kilsaran KPRO Facade Rendering Systems, as certified in this Certificate, are comprised of 'proper materials' fit for their intended use (see Part 4 of this Certificate).

D1 – Kilsaran KPRO Facade Rendering Systems, as certified in this Certificate, meet the requirements of the building regulations for workmanship.

Part A - Structure

A1 – Loading

Kilsaran KPRO Facade Rendering Systems, as certified in this Certificate, have adequate strength and stability (see Parts 3 and 4 of this Certificate).

A2 – Ground Movement

Kilsaran KPRO Facade Rendering Systems, as certified in this Certificate, can be readily used on masonry walls of properly designed buildings to meet the requirements in respect of ground movement.

Part B – Fire Safety

B2 – Internal Fire Spread (Linings)

B3 – Internal Fire Spread (Structure)

B4 – External Fire Spread

Part B Vol 2 – Fire Safety

B7 – Internal Fire Spread (Linings)

B8 – Internal Fire Spread (Structure)

B9 – External Fire Spread

Kilsaran KPRO Facade Rendering Systems, as certified in this Certificate, are non-combustible and have Class A1 reaction to fire classification according to IS EN 13501-1^[3]. They are readily amendable to fire safety design across the range of fire resistance requirements for buildings of all purpose groups and can meet the requirements for fire safety.

Part C – Site Preparation and Resistance to Moisture

C3 – Dangerous Substances

C4 – Resistance to Weather and Ground Moisture

The Certificate holder (Kilsaran International) has taken the responsibility of classifying and labelling the system components under the CLP Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures. Users must refer to the relevant Safety Data Sheet(s).

Kilsaran KPRO Facade Rendering Systems do not compromise the fitting of adequate damp-proof courses, appropriate Radon and dangerous substances protection membranes and gas handling systems to meet the requirements. Kilsaran KPRO Facade Rendering Systems, when properly applied on adequately designed buildings, will provide adequate weather resistance in all exposures, as specified in Part 4 of this Certificate.

Part E – Sound

E1 – Airborne Sound (Walls)

Kilsaran KPRO Facade Rendering Systems will complement the airborne sound resistance of concrete or masonry walls and can be readily included in the design and specification of party walls to meet the airborne sound requirements.

Part L – Conservation of Fuel and Energy

L1 – Conservation of Fuel and Energy

Kilsaran KPRO Facade Rendering Systems will contribute to the thermal resistance of concrete or masonry walls and can be readily included in the analysis of the thermal performance of external walls for the determination of the elemental or overall U-values to meet this requirement.

2.1 PRODUCT DESCRIPTION

The Kilsaran KPRO Façade Rendering Systems are designed for single and multi-coat rendering applications to most common brickwork and blockwork backgrounds. The renders are suitable for both hand and machine application. No scud coat is required when applied by a spray rendering machine, however if the material is being hand applied a scud coat approved by the Certificate holder must be used. The renders are supplied as ready-mix dry material to which clean potable water is added.

The product range is as follows:

- **DuraRend:** KPRO Façade DuraRend is a natural grey coloured rendering mortar designed for single coat application. It is also used as part of the following multi-product systems: KPRO Façade DuraRend Classic, DuraRend Ultra and DuraRend Flex (see Section 2.4.4 of this Certificate). It is suitable for finishing with sponge, float or nap finishes. Where sponge, float or nap finishes are given to the render, slight colour shading may occur due to the nature of these finishes. It is therefore recommended that the finished render surface is painted or given a suitable decorative finish such as suitable paint or resin based render. The minimum finished thickness of KPRO Façade DuraRend shall be no less than 15mm. Product yield is approximately 1.9kg/mm/m².
- **GP Render:** KPRO Façade GP Render is a general purpose rendering mortar designed for multi coat render systems. KPRO Façade GP Render is formulated for use as a backing coat (scratch) and finishing top coat in external rendering and internal plastering. Product yield is approximately 1.9kg/mm/m².
- **UNO:** KPRO Façade UNO is a through coloured decorative rendering mortar designed for single coat application. It is recommended that the render is given a scraped texture finish to ensure colour conformity of finish. KPRO Façade UNO Ultra White may also be given a sponge or nap finish. The minimum thickness of KPRO Façade UNO is 18mm before scraping and 15mm after scraping for sheltered, moderate and severe levels of exposure, and a minimum of 20mm after scraping for very severe levels of exposure. Product yield is approximately 1.9kg/mm/m².

2.1.1 Ancillary Items

Materials required may include:

- Rigid PVC or stainless steel beading profiles:

- Angle bead
- Stop bead
- Belcast bead
- Reveal bead
- Expansion bead profile
- Alkali resistant mesh
- KPRO Façade Super Bond Render – a highly polymer modified proprietary render designed to provide a key on smooth and friable backgrounds

Special equipment and tools required may include:

- Plasterer's knife
- Plasterer's float and sponge
- Ashlar cutter
- Plasterer's straight edge
- Thickness gauge
- Soft bristle brush
- Measuring bucket
- Spraying machine (PFT, Lancy, M-tec, Putzmeister)

2.2 MANUFACTURE

Kilsaran KPRO Façade Rendering Systems are manufactured in a computerised batching facility to controlled product formulations. All components including additives are weight batched to ensure accuracy.

2.2.1 Quality Control

Quality control checks are carried out on the incoming raw materials, during production and on the finished product. The management systems of Kilsaran International have been assessed and registered as meeting the requirements of ISO 9001.

2.3 DELIVERY, STORAGE AND MARKING

The renders are bagged into sealed moisture resistant 25kg paper bags. Bags are delivered on a pallet with a plastic stretch hood. The renders are packaged in their own clearly identifiable bag with the product name and batch number printed on its side, along with the manufacturer's name and the NSAI Agrément logo with the number of this Certificate. Bags have a shelf life of 12 months when stored unopened in their original packaging and kept dry and clear from the ground. As with all cementitious-based materials and products, care must be taken to avoid contact with the skin. For further information refer to the relevant Material Safety Data Sheet available from the Certificate holder.

2.4 INSTALLATION

2.4.1 Installation Control

Application of Kilsaran KPRO Façade Rendering Systems is to be carried out by competent, skilled

renderers or contractors experienced with this type of system, in accordance with the Certificate holder's instructions and the relevant recommendations of IS EN 13914-1^[4].

2.4.2 Site Survey and Preliminary Work

Kilsaran KPRO Facade Rendering Systems are satisfactory for use on brickwork, blockwork and suitably prepared concrete backgrounds. It is essential that such walls are designed and constructed to prevent moisture penetration and the formation of condensation. Kilsaran KPRO Facade Rendering Systems are not suitable for application to gypsum plaster.

Older buildings in coastal areas shall be checked for salt content of the substrate. Test results will determine the suitability of the substrate to receive the render, and will highlight any need for substrate treatments. Kilsaran KPRO Facade Rendering Systems shall not be applied to an area where there is evidence of corrosion of steel reinforcement in the masonry. The renders shall be protected at the top of walls by an adequate overhang or by adequately sealed purpose-made flashing.

A pre-application survey of the property must be carried out by the designer (with the support of the rendering contractor) to determine the suitability of the substrate to receive the product and whether repairs to the building structure are necessary before application. The survey shall take into account, but may not be limited to:

- Preliminary treatment of the background;
- Positioning of beads;
- Detailing around door and window openings;

- DPC level;
- Exact position of movement joints;
- Areas where flexible sealants must be used;
- Any alterations to external plumbing or ducting.

2.4.3 Preparation of Substrate

Kilsaran KPRO Facade Rendering Systems shall only be applied to mature stable surfaces. A minimum of one month shall be allowed following completion of the wall construction before application of the render commences. In slow drying situations, a longer interval must be allowed. All substrates must be clean, sound and free from dust, grease and debris. Any voids and recesses are filled with KPRO Facade GP Render and level uneven surfaces and minimise variations in the finished product. Do not apply Kilsaran KPRO Facade Rendering Systems to frozen, thawing or excessively wet substrates.

As with traditional renders, Kilsaran KPRO Facade Rendering Systems rely on a combination of suction and surface texture to achieve bond. The recommendations set out in IS EN 13914-1^[4] shall be followed. The substrate must be checked for suction by spraying the surface with water. If the water is not absorbed, or the absorption is excessively slow, obtaining a sufficient bond may not be possible. In such instances, a preparatory treatment such as KPRO Facade Super Bond Render may be required, and the advice of the Certificate holder should be sought. However, if the water is readily absorbed by the substrate then it may be too absorbent and pre-wetting of the substrate will be necessary to prevent render mixing water being readily extracted by the background.



In most instances, the excessive suction of a substrate can be controlled by spraying, but not soaking, the substrate with water in the hours prior to render application.

Where the substrate consists of different materials, or materials of variable suction, the recommendations set out in IS EN 13914-1^[4] shall be followed. Section 6.4 (Adequacy of the background), Section 6.14.5.3 (Dissimilar backgrounds that cause differential movement) and Section 7.5 (Preparation of background) outline steps to be taken when rendering over backgrounds with variable suction. KPRO Facade Super Bond Render can be applied as a stipple coat to such substrates to equalise the suction from the background.

Kilsaran KPRO Facade Rendering Systems can be spray applied to most block and brick surfaces without the need of a scud coat. If applying the render by hand the use of a scud coat approved by the Certificate holder is required. A 2:1 sand and cement coat or an adhesive spatter dash (KPRO Facade Super Bond Render) shall be applied to the background by throwing it from a short distance, ensuring complete and even coverage of the substrate. 1 to 2 hours after its application, the scud is dampened down with a fine mist of water to ensure adequate hydration of the cement. The scud coat is allowed to dry and harden fully before application of the KPRO Facade render.

(i) Concrete block and clay brick surfaces

All blockwork and brickwork must be designed and constructed in accordance with current standards and good building practice. In particular, the requirements of IS EN 1996-1-1^[5] and SR 325^[6] must be met.

(ii) Concrete surfaces

When applying Kilsaran KPRO Facade Rendering Systems to concrete surfaces, all dirt, dust, loose matter, efflorescence, formwork oil and organic growth is removed by brushing and washing the surface with a suitable solution before the render is applied. In cases where Kilsaran KPRO Facade Rendering Systems are to be applied at wall openings incorporating concrete lintels, refer to Section 2.4.5 of this Certificate.

For projects involving the use of Kilsaran KPRO Facade Rendering Systems on concrete or fair-faced construction, a method statement must be prepared by the designer with the support of the rendering contractor. This method statement shall address the choice of shutter, mould release agent, removal of laitance or dust on the concrete surface, and the application of a render key coat such as KPRO Facade Super Bond Render. In all cases the key coat material must be approved by Kilsaran International. Application of Kilsaran

KPRO Facade Rendering Systems to concrete surfaces is limited to two storeys above ground level. In all such instances, the advice of the Certificate holder should be sought.

2.4.4 Application Details

It is essential that the application of Kilsaran KPRO Facade Rendering Systems is carried out by experienced rendering contractors, strictly in accordance with the Certificate holder's instructions, this Certificate and the recommendations set out in IS EN 13914-1^[4].

Kilsaran KPRO Facade Rendering Systems must not be applied in rain or mist, at temperatures below +5°C or above +30°C, or if frost is forecast during or soon after the curing process. The renders shall not be applied to frost-bound walls and, as stated in IS EN 13914-1^[4], the temperature of the face of the wall shall be greater than +5°C.

Newly rendered surfaces must be protected from excessive drying caused by strong sunlight or prevailing winds. In sunny weather work shall commence in the shade and follow the sun around the building during the course of the day.

Kilsaran KPRO Facade Rendering Systems must be protected from rain, mist and temperatures below +5°C, during the curing period. Polythene sheeting is recommended for curing and must hang clear of the face of the wall ensuring not to form a tunnel through which the wind could increase the evaporation of water from the newly rendered surface. The sheeting must not be allowed to come into contact with the newly rendered surface as this could produce a patchy appearance.

To minimise colour shade variations and to avoid dry line jointing, continuous surfaces shall be completed without a break. If breaks cannot be avoided they should be made where services or architectural features, such as reveals or lines of doors and windows, help mask cold joints. Where long uninterrupted runs are planned, bags/tubs of the product shall be checked for batch numbers – bags/tubs with different batch numbers shall be checked for colour consistency.

KPRO Facade DuraRend

KPRO Facade DuraRend shall be mixed with 4.75 to 5.5 litres of clean potable water (per 25kg bag) in a suitable mixer or continuous spray-render machine until a uniform material with a consistent workability is achieved.

KPRO Facade DuraRend is applied in one coat consisting of two passes. The first pass shall be applied at a thickness of 3-5mm, followed by a second pass (approximately 30 minutes later) to give a total monolithic coat thickness of 15mm for sheltered, moderate and severe levels of

exposure, and a minimum of 20mm for very severe levels of exposure. When applied to mass concrete, thicknesses can be reduced to 6-20mm. The surface is then levelled using a straight edge or trowel ensuring not to over work the material. Once the material has picked up, the desired finish such as nap, sponge etc is applied. The thickness of the finished render shall be 15mm for sheltered, moderate and severe levels of exposure, and a minimum of 20mm for very severe levels of exposure. Coat thickness shall not be greater than 20mm. When applied to mass concrete, thicknesses can be reduced to 6-20mm.

KPRO Façade DuraRend Classic

The KPRO Façade DuraRend Classic system is primarily used where there is a low risk of substrate movement. KPRO Façade DuraRend is applied in a single coat application at 15–20mm thickness and allowed to cure for 28 days and until a moisture level of $\leq 4\%$ is achieved. When applied to mass concrete, thicknesses can be reduced to 6-20mm. An NSAI Agrément certified coloured primer approved by Kilsaran International is then applied by brush and allowed to dry for 2-3 hours, having due regard to any impact on the reaction to fire classification of the render build-up. A Kilsaran approved synthetic thin coat render finish complying with IS EN 15824^[2] is then applied at a thickness of 0.5-3mm and trowelled to desired finish.

KPRO Façade DuraRend Ultra

The KPRO Façade DuraRend Ultra system is primarily used where there is a medium risk of substrate movement. KPRO Façade DuraRend is applied in a single coat application at 12-20mm thickness and allowed to cure for 28 days and until a moisture level of $\leq 4\%$ is achieved. When applied to mass concrete, thicknesses can be reduced to 6-20mm. A polymer modified cement based reinforcing coat is then applied at 3 – 4mm thickness with glass fibre mesh embedded. An NSAI Agrément certified synthetic thin coat render finish complying with IS EN 15824^[2] which is approved by Kilsaran International is then applied at a thickness of 0.5-3mm and trowelled to desired finish, having due regard to any impact on the reaction to fire classification of the render build-up.

KPRO Façade DuraRend Flex

The KPRO Façade DuraRend Flex system is primarily used where there is a high risk of substrate movement. KPRO Façade DuraRend is applied in a single coat application at 12-20mm thickness and allowed to cure for 28 days and until a moisture level of $\leq 4\%$ is achieved. When applied to mass concrete, thicknesses can be reduced to 6-20mm. A cement-free reinforcing coat is then applied at 3mm thickness with glass fibre mesh embedded. An NSAI Agrément certified synthetic thin coat render finish complying with IS EN

15824^[2] which is approved by Kilsaran International is then applied at a thickness of 0.5-3mm and trowelled to desired finish, having due regard to any impact on the reaction to fire classification of the render build-up.

KPRO Façade UNO

KPRO Façade UNO shall be mixed with 5-6 litres of clean potable water (per 25kg bag) in a suitable mixer or continuous spray-render machine until a uniform material with a consistent workability is achieved.

KPRO Façade UNO is applied in one coat consisting of two passes. The first pass shall be applied at a thickness of 3-5mm, followed by a second pass (approximately 30 minutes later) to give a total monolithic coat thickness of 18-23mm. The surface is then levelled using a straight edge or trowel and allowed to gain its initial set which is typically up to 16 hours (depending on substrate and drying conditions).

When the product has cured sufficiently and gained an initial set, the surface of the render is removed by using a toothed scraper/nail float in a circular motion. 3-5mm of render shall be removed in the scraping process, ensuring the thickness of the finished render is a minimum of 15mm after scraping for sheltered, moderate and severe levels of exposure, and a minimum of 20mm after scraping for very severe levels of exposure.

2.4.5 Design Details

(i) Parapets

Kilsaran KPRO Façade Rendering Systems must not be applied onto flat or sloping surfaces. An adequate flashing must always be provided to prevent water penetrating behind the render.

(ii) Window and door reveals

An alkali resistant mesh (with >6mm aperture for KPRO Façade DuraRend and GP Renders, and with >4mm aperture for KPRO Façade UNO) must be included in rendering along a lintel, and at natural stress points around window and door openings. The mesh must be embedded in the first pass of render either at diagonals or overlapping around the opening. In the interest of durability, stainless steel or PVC beads must be used. Beads must not be used at corners where ashlar features are being applied.

(iii) Ground level detail

A PVC or stainless steel bellcast or stop bead shall be provided 150mm above ground level or above the DPC where the DPC is at a higher level. The render is dressed down to the stop bead, and the plinth is then rendered to complete the façade.

(iv) Dissimilar backgrounds

When using Kilsaran KPRO Façade Rendering Systems over dissimilar backgrounds, Section 6.13.4.3 of IS EN 13914-1^[4] shall be consulted. Where different backgrounds meet, joints must be covered by alkali resistant mesh (with >6mm aperture for KPRO Façade DuraRend and GP Renders, and with >4mm aperture for KPRO Façade UNO) prior to the application of the render. The mesh shall be embedded in a thin coat of Kilsaran External Render as a preliminary process to the first coat.

(v) Expansion joints

Adequate expansion joints must be incorporated into all render finishes and must follow expansion and movement joints in the background. The render must never span or cover a joint in the background. Expansion joint location shall be determined by the designer in conjunction with IS EN 1996-1-1^[5], BS 6093^[7] and SR 325^[6].



3.1 GENERAL

Kilsaran KPRO Facade Rendering Systems will enhance the weather resistance of concrete and masonry walls and provide a decorative finish. The renders are satisfactory for external application to properly designed and constructed walls and can also be used as an internal decorative render.

3.2 STRENGTH AND STABILITY

Kilsaran KPRO Facade Rendering Systems comply with the relevant sections of IS EN 13914-1^[4]. The renders shall not be applied in areas where there is evidence of corrosion of steel reinforcement or other metal products in the background. Kilsaran KPRO Facade Rendering Systems are not suitable for application over gypsum plaster or other previously decorated surfaces.

3.3 STRUCTURAL FIRE SAFETY

Kilsaran KPRO Facade Rendering Systems compliant with IS EN 998-1^[1] are non-combustible and have Class 0 surface spread of flame rating in accordance with Table A6 of TGD to Part B of the Building Regulations 1997 to 2019. These renders, being non-combustible, do not contribute to either fire propagation or surface flame spread. This does not cover the synthetic thin coat renders referred to in Section 2.4.4 of this Certificate.

The renders are non-toxic in fire conditions.

3.4 WEATHER RESISTANCE

Kilsaran KPRO Facade Rendering Systems, when used on properly designed buildings, in accordance with this Certificate, the manufacturer's instructions, and when applied as per sections of IS EN 13914-1^[4] regarding thickness and exposure, will have adequate resistance to wind and wind-driven rain in all exposures (normal and severe) in Ireland (see Section 6.7 of IS EN 13914-1^[4] for further information on resistance to rain penetration). Appendix C of BS 8104^[8] together with information provided by the Irish Meteorological Office shall be consulted. It is important that application and building design/construction details take full account of likely weather exposure conditions. Due to the water repellent additive in the product mix, Kilsaran KPRO Facade Rendering Systems prevent water reaching the substrate during rain. KPRO Facade DuraRend and UNO can also be used as part of a multi-coat system where two or more rendering coats are specified in exposed coastal regions. Consult the Certificate holder for further guidance.

4.1 BEHAVIOUR IN FIRE

Kilsaran KPRO Facade Rendering Systems compliant with IS EN 998-1^[1] are non-combustible and have less than 1.0% of homogeneously distributed organic materials, thus classifying them as reaction to fire Class A1 without the need for test, as per their Declarations of Performance.

Kilsaran KPRO Facade Rendering Systems compliant with IS EN 998-1^[1] are non-toxic in normal use and fire conditions.

4.2 THERMAL CONDUCTIVITY

The thermal conductivity (λ) values for the Kilsaran KPRO Facade Rendering Systems are listed on the manufacturer's Declaration of Performance for each product.

4.3 WATER VAPOUR RESISTANCE

The water vapour permeability coefficient (μ) values of Kilsaran KPRO Facade Rendering Systems tested to IS EN 1015-19^[9] are listed in Table 1.

Product	Water Vapour Permeability Coefficient (μ)*
KPRO Façade DuraRend*	<10
KPRO Façade GP Render	<10
KPRO Façade UNO	<10
* This value does not include the synthetic thin coat render referred to in Section 2.4.4 of this Certificate. Values for this product must be sought from the relevant NSAI Agrément certificate.	

Table 1: Water Vapour Permeability

Section 6.7 of IS EN 13014 requires that for factory made renders used in severe conditions of exposure where the rendering is subject to heavy rain, renders with a capillary water absorption Class Wc2 in accordance with IS EN 998-1^[1] shall be used.

Product	Water Absorption*
KPRO Façade DuraRend	Wc2
KPRO Façade GP Render	Wc2
KPRO Façade UNO	Wc2
* This value does not include the synthetic thin coat render referred to in Section 2.4.4 of this Certificate. Values for this product must be sought from the relevant NSAI Agrément certificate.	

Table 2: Water Absorption

4.4 DURABILITY

External render systems can last in excess of 40 years in accordance with BS 7543^[10] subject to normal use, regular inspection and maintenance. It is important to note that the durability of the render system is entirely dependent on the correct installation of the product in accordance with this Certificate, the manufacturer's instructions, IS EN 13914-1^[4] and ongoing care and maintenance as described in Section 4.5 of this Certificate. Critical details include rendering at window sills, raised features, junctions with eaves and verges, and the use of suitably designed overhangs and flashings. Reference shall be made to IS EN 13914-1^[4] for general advice on design, in particular on the use of angle, stop and movement joint beads.

The history of colour retention of Kilsaran KPRO Façade Rendering Systems is good. The products are less susceptible to crazing and cracking than most traditional renders. Kilsaran KPRO Façade Rendering Systems may become discoloured with time depending on the local environment. Cleaning with water and a stiff brush can normally restore appearance. Although all KPRO coloured rendering mortars are manufactured with an integrated biocide to inhibit biological growth, the product may suffer from algae or lichen growth in a similar manner to traditional finishes – proprietary treatments are available to treat these.

Reference shall be made to Section 6.5 of IS EN 13914-1^[4] and Section 5.3.2 of IS EN 998-1^[1] for further information on durability of renders.

4.5 MAINTENANCE AND REPAIR

While Kilsaran KPRO Façade Rendering Systems can be assumed to be low maintenance, regular checks must be carried out to ensure architectural details are shedding water clear of the building, are present and are functioning correctly. In addition external plumbing fittings such as gutter

and downpipes shall be checked for condition and function.

Repairs may be necessary occasionally and an assessment of the cause shall be undertaken before repairs are carried out. The advice of the Certificate holder should be sought for particular installations, and repairs shall be carried out in accordance with IS EN 13914-1^[4].

4.6 TESTS AND ASSESSMENTS WERE CARRIED OUT TO DETERMINE THE FOLLOWING:

- Compressive strength*
- Reaction to fire*
- Water absorption*
- Water vapour permeability*
- Water vapour permeability after weathering cycles*
- Adhesion after weathering cycles*
- Thermal conductivity*
- Durability against freeze thaw*

4.7 OTHER INVESTIGATIONS

- Existing data on product properties in relation to fire, toxicity, environmental impact and the effect on mechanical strength/stability and durability were assessed.
- The manufacturing process was examined including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.
- Site visits were conducted to assess the practicability of installation and the history of performance in use of the product.

4.8 CE MARKING

The manufacturer has taken responsibility of CE marking the Kilsaran KPRO Façade Rendering Systems in accordance with harmonised European Standard IS EN 998-1^[1]. An asterisk (*) appearing in this Certificate indicates that data shown is an essential characteristic of the product and declared in the manufacturers Declaration of Performance (DoP). Reference shall be made to the latest version of the manufacturer's DoP for current information on any essential characteristics declared by the manufacturer.

5.1 National Standards Authority of Ireland ("NSAI") following consultation with NSAI Agrément has assessed the performance and method of installation of the product/process and the quality of the materials used in its manufacture and certifies the product/process to be fit for the use for which it is certified provided that it is manufactured, installed, used and maintained in accordance with the descriptions and specifications set out in this Certificate and in accordance with the manufacturer's instructions and usual trade practice. This Certificate shall remain valid for five years from date of latest revision so long as:

- (a) the specification of the product is unchanged.
- (b) the Building Regulations 1997 to 2019 and any other regulation or standard applicable to the product/process, its use or installation remains unchanged.
- (c) the product continues to be assessed for the quality of its manufacture and marking by NSAI.
- (d) no new information becomes available which in the opinion of the NSAI, would preclude the granting of the Certificate.
- (e) the product or process continues to be manufactured, installed, used and maintained in accordance with the description, specifications and safety recommendations set out in this certificate.
- (f) the registration and/or surveillance fees due to NSAI are paid.

5.2 The NSAI Agrément mark and certification number may only be used on or in relation to product/processes in respect of which a valid Certificate exists. If the Certificate becomes invalid the Certificate holder must not use the NSAI Agrément mark and certification number and must remove them from the products already marked.

5.3 In granting Certification, the NSAI makes no representation as to;

- (a) the absence or presence of patent rights subsisting in the product/process; or
- (b) the legal right of the Certificate holder to market, install or maintain the product/process; or
- (c) whether individual products have been manufactured or installed by the Certificate holder in accordance with the descriptions and specifications set out in this Certificate.

5.4 This Certificate does not comprise installation instructions and does not replace the manufacturer's directions or any professional or trade advice relating to use and installation which may be appropriate.

5.5 Any recommendations contained in this Certificate relating to the safe use of the certified product/process are preconditions to the validity of the Certificate. However the NSAI does not certify that the manufacture or installation of the certified product or process in accordance with the descriptions and specifications set out in this Certificate will satisfy the requirements of the Safety, Health and Welfare at Work Act 2005, or of any other current or future common law duty of care owed by the manufacturer or by the Certificate holder.

5.6 The NSAI is not responsible to any person or body for loss or damage including personal injury arising as a direct or indirect result of the use of this product or process.

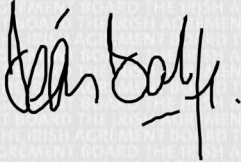
5.7 Where reference is made in this Certificate to any Act of the Oireachtas, Regulation made thereunder, Statutory Instrument, Code of Practice, National Standards, manufacturer's instructions, or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certification.

NSAI Agrément

This Certificate No. **17/0393** is accordingly granted by the NSAI to **Kilsaran International** on behalf of NSAI Agrément.

Date of Issue: **30th January 2018**

Signed



Seán Balfe
Director of NSAI Agrément

Readers may check that the status of this Certificate has not changed by contacting NSAI Agrément, NSAI, 1 Swift Square, Northwood, Santry, Dublin 9, Ireland. Telephone: (01) 807 3800. Fax: (01) 807 3842. www.nsai.ie

Revisions:

09th December 2021: Product name changes to KPRO Facades, standard references updated.

Bibliography

- [1] IS EN 998-1:2016 *Specification for mortar for masonry – Part 1: Rendering and plastering mortar.*
- [2] IS EN 15824:2017 *Specification for external renders and internal plasters based on organic binders.*
- [3] IS EN 13501-1:2018 *Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests.*
- [4] IS EN 13914-1:2016 *Design, preparation and application of external rendering and internal plastering – External rendering.*
- [5] IS EN 1996-1-1:2005+A1:2012 *Eurocode 6 – Design of masonry structures – Part 1-1: General rules for reinforced and unreinforced masonry structures (including Irish National Annex).*
- [6] SR 325:2013+A2:2018/AC:2019 *Recommendations for the design of masonry structures in Ireland to Eurocode 6.*
- [7] BS 6093:2006+A1:2013 *Design of joints and jointing in building construction – Guide.*
- [8] BS 8104:1992 *Code of practice for assessing exposure of walls to wind driven rain.*
- [9] IS EN 1015-19:1999 AMD1 2014 *Methods of test for mortar for masonry – Determination of water vapour permeability of hardened rendering and plastering mortars.*
- [10] BS 7543:2015 *Guide to durability of buildings and building elements, products and components.*