

CERTIFICATE NO. 06/0258

Greenspan Products Ltd.,
Ballyhahill, Co. Limerick, Ireland
Tel: 069 82222
Fax: 069 82226
Email: info@greenspan.ie

Repois R Render

Enduit de Surface Oberflächenbeschichtung

The **Irish Agrément Board** is designated by Government to issue European Technical Approvals. Irish Agrément Board 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 2006**.

The **Irish Agrément Board** operates in association with the **National Standards Authority of Ireland (NSAI)** as the National Member of UEAtc.



PRODUCT DESCRIPTION:

This Certificate relates to Repois R, a one-coat external render with a scratch finish, available in a range of colours.

This Certificate certifies compliance with the requirements of the Building Regulations 1997 to 2006.

This Certificate is generally a confirmation of IETcc Certificate No. 430 issued by the Instituto de Ciencias de la Construcción Eduardo Torroja, Apartado 19002, Serrano Galvache s/n E-28080, Madrid.

USE:

Repois R is designed for weatherproofing external vertical concrete block or brick masonry walls. Conditions for use on fair-faced concrete and high suction surfaces are detailed in section 2.4.2 of this Certificate.

MANUFACTURE & MARKETING:

The product is manufactured and marketed by:

Teais S.A.,
Pol. Ind. Sabon parcel 156,
15142 Artexio,
A Coruna,
Spain.

The product is marketed by:

Greenspan Products Ltd.,
Ballyhahill,
Co. Limerick,
Ireland.
Tel: 069 82222
Fax: 069 82226
Email: info@greenspan.ie

1.1 ASSESSMENT

In the opinion of the Irish Agrément Board (IAB), Repois R, if used in accordance with this Certificate can meet the requirements of the Building Regulations 1997 to 2006, as indicated in Section 1.2 of this Irish Agrément Certificate.

1.2 BUILDING REGULATIONS 1997 to 2006

REQUIREMENT:

Part D – Materials and Workmanship

D3 – Repois R, as certified in this Certificate, is comprised of 'proper materials' fit for their intended use (see Part 4 of this Certificate).

D1 – Repois R, as certified in this Certificate, meets the requirements for workmanship.

Part A - Structure

A1 – Loading

Repois R, as certified in this Certificate, has adequate strength and stability (see Parts 3 and 4 of this Certificate).

A2 – Ground Movement

Repois R, 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

B4 – External Fire Spread

Repois R, as certified in this Certificate, is non-combustible and has a Class O surface spread of flame rating. It is readily amenable 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

Repois R does not compromise the fitting of adequate damp-proof courses, appropriate Radon and dangerous substances protection membranes and gas handling systems to meet the requirements. Repois R, 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)

Repois R will complement the airborne sound resistance of concrete or masonry walls.

Part L – Conservation of Fuel and Energy

L1 – Conservation of Fuel and Energy

Repois R 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

Repois R is a cementitious-based one coat rendering system, based on a designed mix formulation and containing special additives principally for workability, water retention and adhesion. A variety of finishes can be applied after partial hardening. Except for the addition of mixing water, the render is supplied with all of the ingredients fully mixed in sealed plastic-lined 25kg bags.

The recommended rendering thickness (finished thickness) is 15mm average, 10mm minimum.

2.1.1 Ancillary Items

Materials required may include:

- Stainless steel drip, stop, movement and corner beads
- Bonding agent for certain substrates
- Alkali resistant fibre mesh

Special equipment and tools required may include:

- Plasterers knife
- Trowel, steel trowel
- Large and small scrapers
- Ashlar cutter
- Plasterer's straight edge
- Thickness gauge
- Soft bristle brush
- Measuring bucket
- Spraying machine

2.2 MANUFACTURE

Repois R is manufactured by a fully automated process, mixing the main components previously incorporated on an automatic scale, to which secondary additives are added. Once the mixture is concluded (controlled by an automatic timer), the product is placed in hoppers that feed the bag fillers.

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 Teais S.A. have been assessed and registered as meeting the requirements of ISO 9001:2000 by LRQA Ltd. (Certificate No. E200030).

2.3 DELIVERY, STORAGE AND MARKING

The product is packed in a layered polypropylene sack with an intermediate layer of polypropylene with a bag thickness of 500µm. The net weight of the sack is 25kg (±2%). Each sack is marked bearing details of product name, colour, job number, date of production and bags per tonne. The bags are then placed on pallets which bear the manufacturer's name and the Irish Agrément Board logo with the number of this Certificate.

Repois R should be stored in a ventilated, covered, dry space. Unopened bags may be stored for up to one year.

2.4 INSTALLATION

2.4.1 Installation Control

Application of Repois R is to be carried out in accordance with the Certificate holder's instructions and the relevant recommendations of IS EN 13914-1:2005 *Design, preparation and application of external rendering and internal plastering – External rendering* and BS 5262:1991 *Code of practice for external rendering*.

2.4.2 Preparation of Substrate

Repois R should only be applied to mature stable surfaces. A minimum of one month should be allowed following completion of the wall construction before application of the render commences. In slow drying situations, a longer interval should be allowed. All substrates must be clean, sound and dust free. As with traditional renders, Repois R relies on a combination of suction and surface texture to achieve bond. The recommendations set out in IS EN 13914-1:2005 and BS 5262:1991 should be followed. It is essential that all steps are taken to ensure that a satisfactory bond is achieved between the render and the substrate.

(i) Concrete block and clay brick surfaces

All blockwork and brickwork should be designed and constructed in accordance with current standards and good building practice. In particular, the requirements of IS 325-1:1986 *Structural use of unreinforced masonry* and IS 325-2:1995 *Masonry construction* must be met.

(ii) Concrete surfaces

For concrete surfaces, all dirt, dust, loose matter, efflorescence, formwork oil and organic growth must be removed by brushing and washing as required with suitable solutions before render is applied. The manufacturer's guidance should be sought in cases where Repois R is applied at wall openings incorporating concrete lintels.

For each project involving the use of Repois R on concrete or fair-faced concrete, a method statement must be prepared. This method statement should address such issues as choice of shutter mould release agent, removal of laitance or dust on the concrete surface and the application of a key coat with a bonding agent. Rendering on this type of background is limited to a maximum of two storeys above ground level.

2.4.3 Application Details

Repois R must only be applied on site by trained applicators.

The products should be added to clean water and thoroughly mixed using a drill and paddle or a free fall mixer in accordance with the individual product data sheets. Products applied using a spray machine are used in accordance with the instructions of the spray machine manufacturer.

The products should not be applied in rain or mist, at temperatures above 35°C or below 5°C or, if exposure to frost is likely to occur, during curing. In common with traditional sand/cement renders, they must not be applied to frostbound walls.

Once the products have been mixed to the desired consistency, additional water should not be added. The products should not be remixed once the material has started to set.

In sunny weather, work should commence on the shady side of the building and be continued round following the sun to prevent the rendering drying out too rapidly.

To minimise colour shade variations and to avoid dry line jointing, continuous surfaces should 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 of the product should be checked for batch numbers – bags with different batch numbers should be checked for colour consistency.

On completion of the rendering, the surface must be checked to ensure an even coverage of render.

2.4.4 Design Details

(i) Parapets

Repois R 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

Alkali resistant mesh reinforcement must be included in rendering along the lintel. External arrisses are formed using bevelled timber battens or by using stainless steel beads. In the interest of durability, stainless steel expansion joint beading should be used (see Part 4.4 of this Certificate). Beads must not be used at corners where ashlar features are being formed.

(iii) Ground level detail

A bellcast or stop bead should be provided 150mm above ground level or above the DPC where the DPC is at a higher level. The Repois R render is dressed down to the stop bead. The bellcast is then rendered to complete the façade.

(iv) Dissimilar backgrounds

Where different backgrounds meet, in areas of weak substrate or areas subject to high stress (corners of doors, windows), joints should be covered by alkali resistant mesh reinforcement prior to applying the Repois R render. The mesh should be bedded in a thin coat of Repois R as a preliminary process to the first coat.

(v) Expansion joints

Where expansion or movement joints occur they should be brought through to the surface and not covered by the Repois R render. Advice should be sought from the Certificate holder on movement beads that can be used at expansion joint locations. In the interest of durability, stainless steel expansion joint beading should be used (see Part 4.4 of this Certificate).

3.1 GENERAL

Repois R will enhance the weather resistance of concrete and masonry walls and provide a decorative finish. The render is satisfactory for external application to properly designed and constructed walls.

3.2 STRENGTH AND STABILITY

Repois R complies with the relevant sections of IS EN 13914-1:2005 and BS 5262:1991. Repois R is considered suitable for use in all categories in Table 2 of BS 8200:1985 *Code of practice for design of non-loadbearing external vertical elements of a building*. The render should not be applied in areas where there is evidence of corrosion of steel reinforcement or other metal products in the background. Repois R is not suitable for application over gypsum plaster or previously decorated surfaces.

3.3 STRUCTURAL FIRE SAFETY

Repois R is non-combustible and has a Class O spread of flame rating in accordance with Table A6 of TGD to Part B of the Building Regulations 1997 to 2006.

Repois R, being non-combustible, does not contribute to either fire propagation or surface flame spread. The render is non-toxic in fire conditions.

3.4 WEATHER RESISTANCE

Repois R, when used on properly designed buildings, in accordance with this Certificate, the manufacturer's instructions, and when applied as per the sections of IS EN 13914-1:2005 regarding thickness and exposure, will have adequate resistance to wind and wind-driven rain in all exposures in Ireland. 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, Repois R prevents water reaching the substrate during rain.

4.1 BEHAVIOUR IN FIRE

In accordance with Table A6 of TGD B to the Building Regulations 1997 to 2006, Repois R is a Class O spread of flame classification and are non-combustible.

Repois R is non-toxic in normal use and fire conditions.

4.2 THERMAL CONDUCTIVITY

On the basis of material composition and density, Repois R has a thermal conductivity (λ) value of 0.57 W/mK.

4.3 DURABILITY

Repois R, used in accordance with this Certificate and as per the manufacturer's instructions, and using stainless steel beading having a corrosion resistance at least equal to Grade 30 per BS 1149-2, should have a life of at least 60 years subject to normal use and maintenance.

The history of the colour retention of Repois R is good. The products are less susceptible to crazing and cracking than traditional renders. Repois R may become discoloured with time depending on the local environment. Cleaning with water and a stiff brush can normally restore appearance. The product may suffer from algae or lichen growth in a similar manner to traditional finishes – proprietary treatments are available to treat these.

4.4 MAINTENANCE AND REPAIR

While Repois R can be assumed to be low maintenance, it is recommended that periodic checks are carried out to ensure that architectural details for shedding water clear of the building are still functioning properly.

Repairs may be necessary occasionally and an assessment of the cause should 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 BS 5262:1991.

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

- Sieve grading
- Ash content
- Density
- Flexural and compressive strength of mortars
- Initial surface absorption
- Water vapour permeability
- Effect of accelerated ageing on bond strength
- Impact resistance

4.6 OTHER INVESTIGATIONS

- (i) Existing data on product properties in relation to weather resistance and the effect on mechanical strength/stability and durability were assessed.
- (ii) 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.
- (iii) Site visits were conducted to assess the practicability of installation and the history of performance in use of the product.

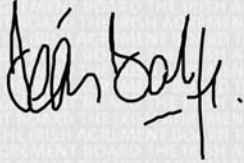
- 5.1** National Standards Authority of Ireland ("NSAI") following consultation with the Irish Agrément Board ("IAB") has assessed the performance and method of installation of the product/process and the quality of the materials used in its manufacture and certifies the product/process to be fit for 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 issue so long as:
- (a) the specification of the product is unchanged.
 - (b) the Building Regulations 1997 to 2006 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 IAB are paid.
- 5.2** The IAB 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 IAB 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 1989, 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.

The Irish Agrément Board

This Certificate No. **06/0258** is accordingly granted by the NSAI to **Greenspan Products Ltd.** on behalf of The Irish Agrément Board.

Date of Issue: **November 2006**

Signed



Seán Balfe
Director of the Irish Agrément Board

Readers may check that the status of this Certificate has not changed by contacting the Irish Agrément Board, NSAI, Glasnevin, Dublin 9, Ireland. Telephone: (01) 807 3800. Fax: (01) 807 3842. www.n sai.ie