Terrix® RD-PS-S
polymer-silicate render for spray application

TERRIX®
renders

V.1.2.G 2019/07

PCC Therm UK

Terrix® RD-PS-S
polymer-silicate render

A premium polymer-silicate thin coat render for spray application that is flame retardant, has very high resistance to the elements, won't crack or flake, very resistant to algae/staining and is more suitable for winter applications than acrylic or silicone renders due to its partly chemical bonding properties.
Terrix®Render is based on innovative Swiss, patented technology converting potassium water glass into a polymer. Polymer-silicate render offers all advantages of well know silicate renders without limitations related to the application process (silicate renders are very often used for renovation of historical/listed buildings due to its longevity)**. Due to its mineral characteristic and lack of surface electrostatics, the product is the most dirt resistant type of the render on the market and will never delaminate as it is adhered to a substrate by a chemical reaction.**
Another important property of the render is its built-in high resistance to microbial contamination (eg. algae) as well as efflorescence. Terrix® RD-PS-S 1.5 is recommended for use in coastal areas where exposure for elements is high.

The benefits of Terrix® RD-PS-S polymer-silicate render

Benefits to the customer:

1. **No flaking or cracking** as Terrix® RD-PS-S paints bond to the substrate by chemical reaction,. Acrylic and silicone renders create a film on top of a substrate which can lead to peeling or cracking.

2. **High resistance to elements** - the render is fully suitable for costal application.

3. **Very high resistance to dirt**, not achievable by any organic based renders on the market (all acrylics and silicone even with self clean effect) it is due to its mineral formulation therefore lack of surface electrostatics. The dust wont't be attracted to the render.

4. **Flame retardancy** due to the lack of organic components in the render and pigments used for colouring. In contrast to most renders on the market and all, Terrix® RD-PS-S provides protection against the spread of flame. Mineral characteristic of the product makes it fully incombustible.

5. **Very high resistance to yellowing** - Built in UV blockers to maintain original look of render.

6. **Natural algae resistance** - Increased Ph level (high alkalinity) delivers natural and long lasting protection. Other products on the market are protected by addition of biocides which have limited lifespan (5-6 years).
7. **Very low water absorption**. The product is more resistant for winter when water freezes and by expanding causes system failures.

8. **Spot repairs** - the product can be easily spot repaired without leaving any visible patches which is usually impossible to achieve with hand applied renders on the market.

9. **Low maintenance cost** - due to render prosperities and application method the cost of maintenance is usually many times lower vs other products.

Benefits to the applicator:

1. Spray application - up to 5 times faster than traditional application.

2. Decreased wash-off risk - due to the partly chemical curing process. Acrylic and silicon renders drying by evaporation only. During winter time that process may be very long and lead to wash offs even after few weeks after application.

3. Easy spot repairs - effortless snagging and seamless spot repairs - the product consistency and formulation allows for simple snagging/spot repairs without the need to redo the entire wall.

4. Can be applied on not fully dry substrates - due to the polymer-silicate prosperities of the product, it is fully vapour permeable and therefore the render can be used for difficult applications like old damp buildings or new builds where walls and renders are still wet and use of silicone or acrylic renders would not be possible.

Terrix® RD-PS-S polymer-silicate render vs high quality silicon renders in the U.K.

	property	High quality silicon renders in the U.K. (manual application)	PCC TERRIX® RD-PS-S polymer-silicate premium finishing coat
1	Render type	silicone	polymer-silicate
2	Category	premium	premium
3	Black mould/ algae resistance	limited	very high
4	Adhesion to substrate	mechanical (film)	chemical bonding
5	Risk of cracking or flacking	high	none
6	Dirt resistance	average	very high
7	Vapour permeability	average	very high
8	Application on not fully dry substrates	not possible	possible
9	Resistance to elements	average	very high
10	Spot repair	difficult	easy
11	Flame Retardant	none	Category A
12	Colour resistance	average to good	very good
13	Water absorption	low	very low

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Terrix® RD-PS-S
polymer-silicate render

main properties:

- Extended resistance for dirt due to the lack of surface electrostatics.
- Highly extended lifespan vs silicone based renders.
- Extended resistance for dirt due to the lack of surface electrostatics.
- Bonding to substrate by chemical reaction - no risk of flaking or delamination.
- High resistance to algae growth.
- Full vapour permeability.
- High resistance to elements.
- Low water absorption.
- Suitable for spray application (up to 5 times faster).
- Low cost maintenance vs other renders.

product description and areas of application:

A modern polymer-silicate thin coat render for spray application.
Terrix® RD-PS-S 1.5 is based on innovative Swiss, patented technology converting potassium water glass into a polymer. Polymer-silicate render has all advantages of well known in heritage/historical building renovation market silicate renders without limitations related to the application process. Due to its mineral characteristic and lack of surface electrostatics, the product is the most resistant type of the render on the market. Terrix® RD-PS-S 1.5 will never delaminate as it is adhered to a substrate by a chemical reaction.
Another important property of the render is its built-in high resistance to microbial contamination (eg. algae) as well as efflorescence. Terrix® RD-PS-S 1.5 is recommended for use in coastal areas where exposure for elements is high.

Terrix® RD-PS-S 1.5 can be used on one of the following systems:

- part of EWI systems based on EPS, PUR or Mineral Wool
- part of anti-crack renovation render system
- part of two coat render system
- part of cavity-free timber frame system

Terrix® RD-PS-S 1.5 is suitable for both new build and retrofit and can be applied to mineral and synthetic substrates (e.g. concrete, cement and limestone renders), a substrate covered with sound synthetic coatings.

technical data:

Base binder: specially modified potassium water glass;
Pigments: non-organic coloured pigments with high resistance to elements
Density: about 1.50 g/cm3;
Colours: white and selected colours from PCC colour chart as well as custom pastel colours;
Texture: grained 1.5mm;
Diluent: water;
Average usage: 2.2kg/m2;
Application temperature (ambient and substrate): from +5°C to +25°C
Maximum application relative air humidity: ≤75%;
Vapour permeability: Sd = 0.05 m (CAT. V1);
Water absorption: w = 0.36 kg/m2h0.5 (CAT. W2)
Packaging: Single-use plastic bucket contains 20kg of the product.
Storage: Store in the tightly sealed, original packaging in a cool area ensuring protection against frost. Opened packaging should be tightly closed and used as quickly as possible.
Shelf life: 12 months from the date of production (factory sealed packaging).

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application:

Substrate preparation:

Apply to a sound and clean substrate (without cracks and delaminations), degreased, even and dry, and biological or chemical efflorescence free). The substrate should be free of algae/fungi growth.
In case of microbial contamination, the substrate should be cleaned with a power washer. Subsequently Terrix® PR-AR solution for removing microbial contamination to be applied as per product manual. Any loose layers that are not bounded to the substrate (such as loose plasters or flaked paint coats) should be removed. Wash and degrease old and/ or dirty substrate with water and product Terrix® PR-CL cleaning agent. If there are any large irregularities to the substrate, these should be levelled out by using levelling compound. Small irregularities can be levelled with levelling render. Before applying the levelling compound/render - refer to the product manuals and data sheets. Absorbent substrates should be primed before levelling compound is being applies.
Note: the finish coat may not be applied on newly completed mineral substrates (i.e cement, concrete and lime mortar renders) - min.: 2 weeks curing period is required.
If product is being used as a part of TERRIX® render systems refer to the system manual for detailed application instructions.

Priming:

The substrate should be primed with Terrix® PR-PS-R before applying the render. Primer should be dry before applying a finish coat (ca. 24 h). It is recommended to use a primer that is of the same colour as the finish coat.
Product preparation:
The packaging contains a ready-to-use product. If stored for a long time and before application, the product should be thoroughly mixed with a low-speed mixer fitted with a basket stirrer until a smooth, homogenous consistency is obtained. Further mixing is not recommended as it may result in excessive aeration of the product. If required, add a small amount of clean water (max. 0.1 l per 20 kg of the product). Quantity of added water may vary for different substrate types, weather conditions and application method.
Application method:
Render should be applied onto the substrate by using a pneumatic spraying device at a working pressure of 3÷4 atmospheres and a nozzle diameter of 5÷6 mm. While spraying, the gun should be held perpendicularly to the substrate at a distance of 0.4-0.6 m.

Drying:

Typical binding (setting) time ca. 24h (20°C, 55% RH). Note: Drying time may be longer due to low temperatures and high relative humidity. To assist the drying of the finish coat, the surface should be protected against precipitation and condensation.

Note: If applied in adverse weather conditions ask for winter version of the product Terrix® RD-PS-SW 1.5 which gives the product accelerated 8h wash-off resistance (min temperature 5°C, 75% RH)

Useful hints:

The final effect may depend on the substrate type. For non-uniform substrates, it is recommended to skim at first the whole surface with base coat mortar. To avoid colour differences, a single batch product should be used on a single application / architectural element. 'Wet on wet' method should be used. All tools should be cleaned with water after work is completed. To be applied on dry days at temperatures between 5-25°C. Avoid applying in direct sunlight or during strong winds. To protect the top coat against inclement weather conditions, scaffolding should be covered with some protective netting or tarpaulin.

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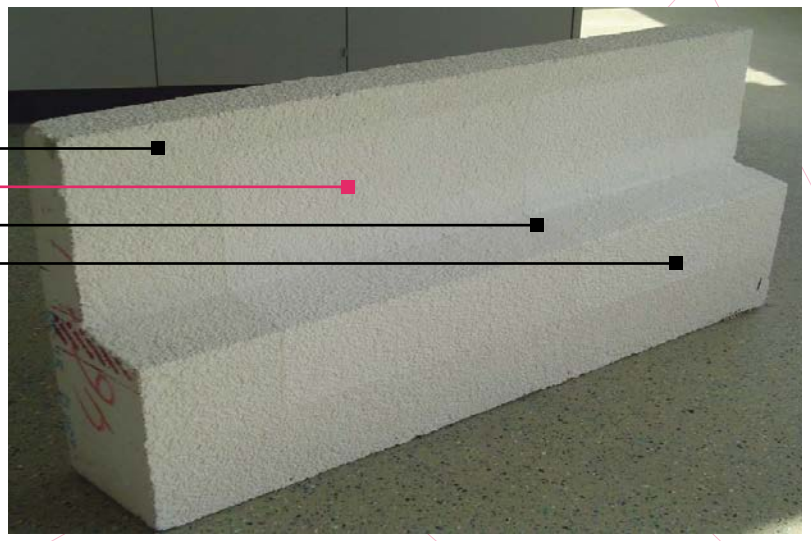
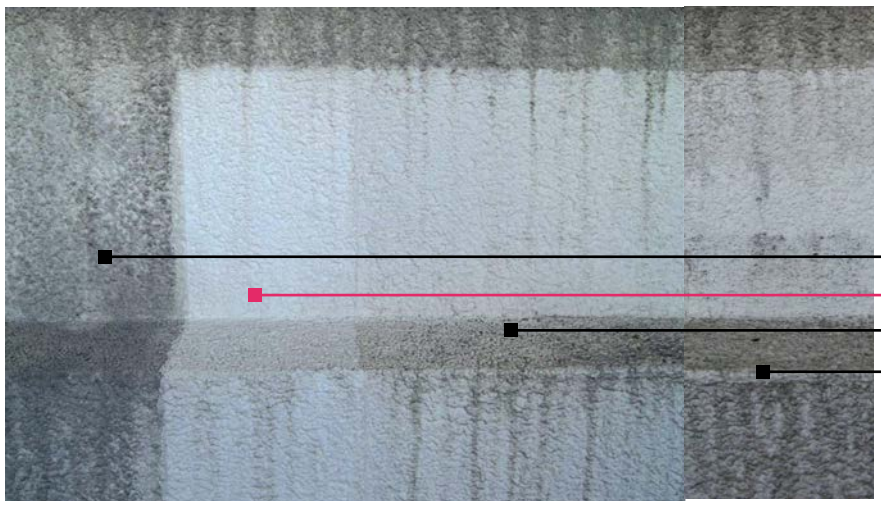
Dirt resistance:

after exposure for 20 years in a big city*

Mineral Render (e.g. K-Rend)
TERRIX® Render (polymer-silicate)
Silicone Render (e.g. STO)
Acrylic Render (e.g. Weatherby)



after application



20 years later

Mineral Render (e.g. K-Rend)
TERRIX® Render (polymer-silicate)
Silicone Render (e.g. STO)
Acrylic Render (e.g. Weatherby)

Algae resistance:

10 years after application (the same location and exposure)

TERRIX® Render (polymer-silicate)

High Quality Silicone Render

Resistance to elements:

6 years after application (seafront located building)

TERRIX® Render (polymer-silicate)

Other render in the same location

* or 3 next to a cement factory without filtration systems

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TERRIX® renders

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