

PRODUCT INFORMATION

PROTECTASEAL S

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Manufacturer's Code: RPPSS

Updated: 01/01/2021

Product Name: PROTECTASEAL S

Description: PROTECTASEAL S is a solvent-based oil and water repellent. The product is designed as a sealer to penetrate into the capillaries of the masonry substrate and permanently bond to the substrate rendering the substrate oil and water repellent or stain resistant. The sealer provides excellent stain resistance against a majority of staining materials such as oil, coffee, wine, tannin, food or food colouring materials. The treatment does not significantly change the appearance and vapour permeability of the substrate, however, slight surface darkening may occur with some of substrates after the treatment.

Recommended Uses: PROTECTASEAL S is suitable for treating all masonry materials including natural stones, concrete blocks, pavers, driveways, clay bricks, tiles and grouts. PROTECTASEAL S can be applied to both permeable and dense substrates including polished masonry. Some of the important features include:

- Excellent resistance to oil & water-based stains
- Significant reduction in water absorption and algae/mould growth
- Deep penetration with permanent bonding to the substrate
- Durable protection and wearing resistance
- Natural finish with almost no change to the surface appearance or texture
- Suitable for porous, dense or polished masonry materials

Test & Performance: 1. Water Absorption

The capillary water absorption was conducted according to DIN 52617 and a water absorption results are shown in the following chart (Figure 1). The water absorption result clearly indicates that the capillary water absorptions of all treated substrates are significantly reduced.

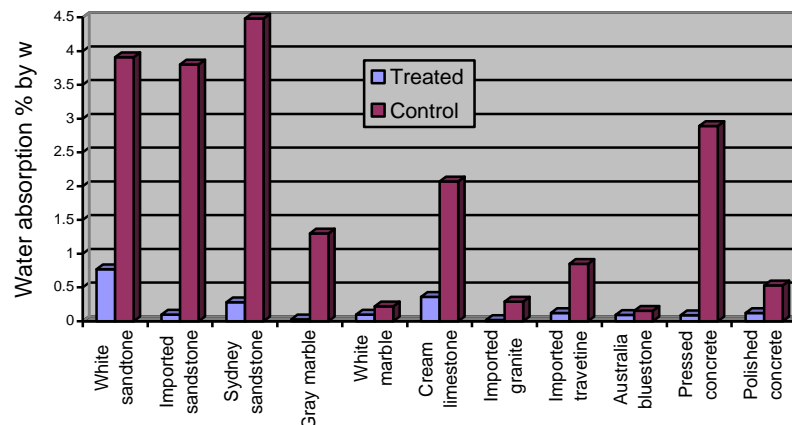


Figure 1: Capillary Water Absorption

2. Penetration Depth

The level of penetration depth is an important property for a penetrating sealer. High penetration depth not only provides more significant water and stain resistance, but also extends durability to the treated surface providing better protection against UV, traffic and weathering damage. The penetration depths of all treated substrates in this test are listed in Table 1. The results clearly indicate that PROTECTASEAL S achieved significant penetration depths in all of the treated masonry substrates, except for Australian bluestone which is a very dense substrate for which, only a limited penetration depth is achieved.

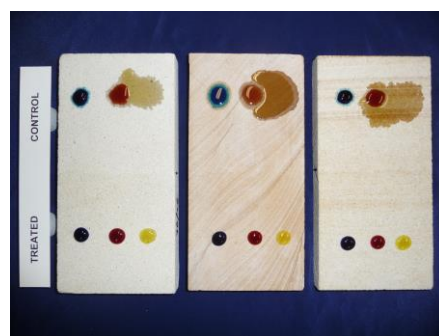
Table 1: Penetration Depth

Substrates	Penetration Depth (mm)
White Sandstone	4
Imported Sandstone	16
Sydney Sandstone	5
Grey Polished Marble	8
White Polished Marble	6
Cream Limestone	1-2
Imported Granite	20
Imported Travertine	1-2
Australian Bluestone	<1
Pressed Concrete	50
Wet-Cast Polished Concrete	1-3

2. Stain Resistance

Stains (food dye, red wine, and olive oil) were placed as a droplet onto the surfaces of both treated and control surfaces in an order of food dye (left), red wine (centre) and olive oil (right). After approximately 10 minutes, the stains were removed and the surfaces were washed with a dishwasher detergent and nylon brush under running tap water. The substrates were then allowed to dry before the surfaces were visually examined for staining. The results are shown in the photos below. The photos on the left were taken after the staining materials were placed onto the surfaces. The bottom was the treated surface while the top part was the untreated as the control. The photos on the right were taken after the stains were removed and surfaces were washed and dried.

- 1). Sandstone (from left to right): White Sandstone, Imported Sandstone & Sydney Sandstone.

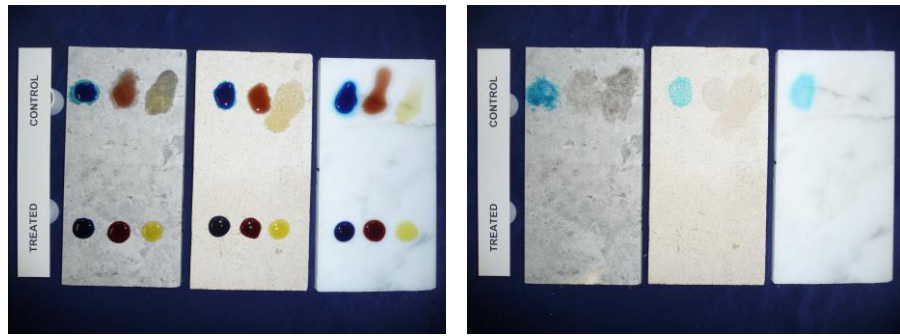


Stain application

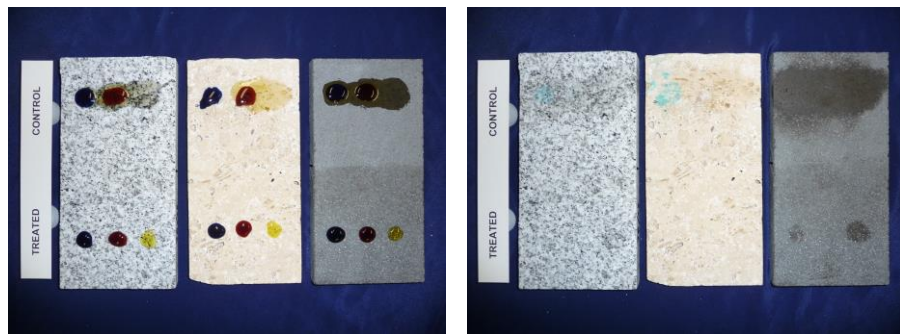


Stains removed, washed and dried

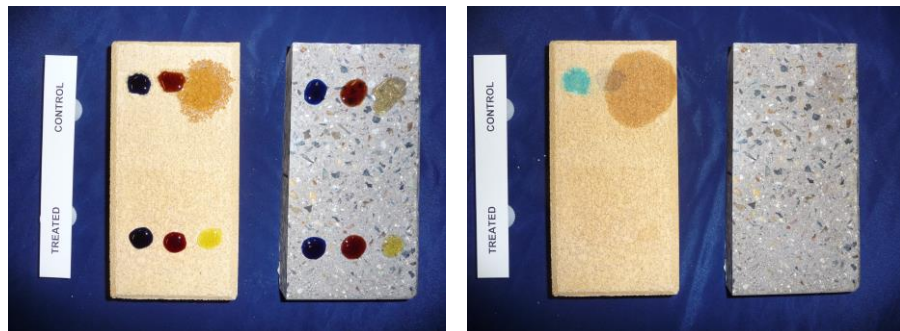
- 2). Marble & Limestone (from left to right): Grey Polished Marble, Limestone & White Polished Marble.



- 3). Marble & Limestone (from left to right): Grey Polished Marble, Limestone & White Polished Marble.



- 4). Concrete (from left to right): Pressed Concrete Paver & Wet-Cast Polished Concrete Paver.



The above staining test results indicated that all treated surfaces had almost no stains or the stains were significantly reduced compared to those of the control surfaces where heavy stains remained after the stain resistance test'

Use Instructions:

Read the product information sheet before application. Do not apply if extreme weather conditions are expected. The surface to be treated should be dry, firm and free from grime, oil and any previous coatings or sealers. Cracks should be filled and allowed to cure before application. As masonry material varies, a test MUST be conducted prior to application to determine the suitability of this product for the purpose.

PROTECTASEAL S is best applied using a low-pressure hand spray. The product can be applied using a brush, a roller or similar. The initial treated surface should have a mirror-like wet film appearance. After the 1st coat is completely absorbed by the surface while surface is still wet, apply the 2nd coat. Any remaining sealer on the surface which is not absorbed by the surface for over 10 minutes should be removed to avoid excessive accumulation of the sealer, which may cause colour change or uneven finish.

The consumption of PROTECTASEAL S varies depending on the permeability of substrates in the order of 2-25 m² per litre per coat or could be out of this range significantly.

Similarly, the number of applications depends on the permeability of substrates. Two coats wet-on-wet are generally recommended. For very permeable substrate, more coats are required. However, one or two light coats are sufficient for very dense substrates such as bluestone and slate. Over application may cause excessive colour change and surface unevenness. The best way to determine the consumption and number of coats is by testing in a small area before application.

For smooth or polished substrates, it may be necessary to polish the surface after application with a light colour dry cloth to reveal the original finish. This may be done after the surface is touch dry or within a couple of hours after application. Moistening the cloth with PROTECTASEAL S may help to ease the polishing.

The initial oil and water repellent effect will develop after the surface is touch dry. Full curing may take up to 7 days. Avoid heavy traffic for minimum 24 hours. The equipment can be washed in mineral turpentine or other organic solvents.

Typical Data:	Appearance:	colorless or pale yellowish liquid
	Specific Gravity:	approximately 0.8g/ml at 20 °C
	Solubility:	soluble in hydrocarbon or alcoholic solvents
	VOC content:	>50%
	Flash point:	26°C

Important Note: PROTECTASEAL S penetrates into the masonry capillaries and renders the surface oil & water repellent without blocking the capillaries. Prolonged contact of stains with the surface can still cause staining. Therefore, it is strongly recommended that stains should be removed as soon as possible to avoid possible permanent staining. The sealer will not prevent surface etching or wearing. PROTECTASEAL S will make the maintenance and cleaning of a treated surface easier. General cleaning with household detergent, water and gentle brushing is required. Avoid acid or alkaline cleaning materials and aggressive brushing.

Handling & Storage: PROTECTASEAL S is a hazardous and flammable material. Refer to the product material safety data sheet for safe handling and storage. The product has a shelf life of 12 months in sealed containers under 25°C. The product should be used as soon as possible after opening. Never contaminate the product with building materials or any form of moisture.

Stored in a cool dry place away from fire or ignition sources. Use with sufficient ventilation away from any fire or ignition sources.

KEEP OUT OF REACH OF CHILDREN!

Packaging: PROTECTASEAL S is available in 1, 5, 20, 200 & 1000 litre metal drums.

Disclaimer:

The information given in this data sheet is based on many years of experience and is correct to the best of our knowledge. As the storage, handling and application of this material is beyond our control; we can only be responsible for the quality of our product at the time of dispatch. We reserve the right to alter certain product parameters within the spectrum of properties in order to keep abreast of technical advances. It is the responsibility of the end user to determine the suitability of this material for any particular application.