

KEIM PSS 20

Reversible graffiti protection system



1. Product description

PSS 20 is a completely reversible protection system for protection against graffiti, advertising bill sticking marks, and also protects against airborne contamination (CO₂, soot, etc.) for facades, walls, indoors and outdoors. PSS 20 is made of vegetable polysaccharides and water with a high viscosity. PSS 20 is a natural sustainable product that is absolutely harmless to man, animal life and the environment. PSS 20 is sprayed on to the wall in one or more coats with an Airless appliance, where on drying it forms a gossamer-thin protective film, normally invisible to the eye and creates a fully breathable type of coating. PSS 20 should be applied by skilled tradesmen who have received the appropriate training.

2. Field of application

PSS 20 can in principle be applied to all washable substrates. In the case of water-repellent substrates (e.g. those treated with hydrophobic agents), the surface tension must first be reduced with a pre-treatment or primer. PSS 20 should only be used on vertical surfaces. PSS 20 is especially suitable for all kinds of natural and artificial stone facades, clinker, concrete, brick, mineral coatings, metal, and aluminum facades.

3. Product properties

PSS 20 comprises vegetable polysaccharides and water with a high viscosity. The components of PSS 20 carry the E-numbers used in the foodstuffs industry. Therefore, PSS 20 is absolutely harmless to man, animal life and the environment.

- Appearance: slightly cloudy liquid gel
- Viscosity: 6000-7200 cpa
- Boiling point: 100° C
- Flammability: non-flammable
- No toxic gases produced on decomposition by heat
- Water vapor permeability: according to DIN 52615: Sd-value 0.012 m (EMPA-Test No. 155194 of 06.10.94) 80 Perms
- Carbonization: good retardant effect, similar to a concrete glaze (LPM Construction materials lab Test No. A-13'041-1 of 18.03.93)
- No VOC's
- Totally reversible by means of hot water
- Reactivity: Highly alkaline conditions are to be avoided
- PSS 20 normally only impedes the sound absorption capability of noise protection walls to an insignificant degree (Test Deutsche Bahn, FT-Centre Munich, of 20.02.98)

Material characteristics

Specific weight: approx. 1.1 g/cm³
pH-value: approx. 6.5

Color shade

Clear, slightly cloudy

4. Application instructions

Substrate preparation

The substrate must be sound, clean and free of oil, dust, grease, and silicone.

For absorbent substrates:

Thoroughly pre-wet substrate this fills the pores allowing the PSS 20 to form its protective coat on



the surface with as little as possible penetration of the PSS 20 into the substrate.

For non-absorbent substrates:

Substrate must be clean and dry at the time of application.

Application

PSS 20 is applied to the surface in two or three coats using airless spray equipment (spraying without air), at a pressure of between 100 - 200 bar (1450 - 2900 psi). When spraying, both vertical and horizontal overlapping pattern should be used, which together will correspond to a normal coat of PSS 20. For each coat, a quantity of PSS 20 between a minimum of 0.10 to a maximum of 0.20 l/m² (0.01 - 0.02 l/sq.ft.) should be applied. The thickness of the protective film after drying should be approx. 0.030-0.035 mm (1.18 - 1.38 mil). A surface temperature which is too hot during the application of PSS 20 leads to a rapid evaporation of the water in PSS 20. This can lead to problems of binding between PSS 20 and the surface being treated. PSS 20 should be applied by skilled tradesmen who have received the appropriate training.

Note: PSS 20 is very slippery in its liquid and/or damp state. PSS 20 should therefore only be used on vertical surfaces. If PSS 20 is dropped onto the floor, it must be immediately removed or be washed away in order to avoid accidents through slipping.

Working conditions

Air and surface temperature should be > 5°C (> 41° F) and < 35°C (< 95° F)

Do not apply in direct sunlight or onto sun-heated substrates. Protect coated surfaces from direct

sunlight, wind and rain during and after application until dry.

Drying times

A drying time of 1 - 4 hours between coats (each coat should be dry to the touch before the next coat is applied) at least 12 - 48 hours must be allowed to fully dry. Drying times will depend on the weather, temperature and humidity. Special care should be taken that the surface does not dry too quickly as this will result in a sheen on the surface.

Consumption

Consumption rate of between 0.20 and 0.60 l/m² (0.02 - 0.06 liters/sq.ft.) (0.005 - 0.016 gal/sq.ft.) is required when using the product as a graffiti protection and between 0.10 and 0.20 l/m² (0.01 - 0.02 l/sq.ft.) (0.003 - 0.006 gal/sq.ft.) for use as a soiling protection.

The stated consumption value is for guidance and depends on the absorbency and texture of the substrate. Exact consumption values can only be determined by trial areas on the structure to be coated.

Cleaning of tools

Clean with water immediately after use.

Removal and Cleaning of surface protected with PSS 20

The surface with the graffiti must be activated for several minutes using hot water 60° C (140° F) without pressure, that means the surface must first be soaked completely with hot water and then be kept dripping wet with hot water for 2-4 minutes (depending on the external temperature and the



type of sub-surface). During this time, the PSS 20 film begins to swell, it is very important that the PSS 20 film swells up under the graffiti. In the case of cold external and/or wall temperatures and/or with soft surfaces that only withstand low water pressures, good activation with hot water is particularly important.

After the activation, the PSS 20 protective film is removed together with the graffiti and other soiling by hot water jet from a hot water pressure washer with a wide fan tip. The water jet must always be angled to the surface (30° to 45° degrees, never vertical, always keep the tip of the sprayer at least 20 cm/8 in. from the surface). To ensure that the water has sufficient time to penetrate the PSS 20 film under the graffiti. Best practice is to remove the graffiti from all sides so that there is the same amount of time for the activation of the PSS 20 film on all sides of the graffiti. You will know when you have reached the limit of the activated PSS 20 if the paint of the graffiti suddenly cannot be peeled off anymore, move the water jet to another side of the graffiti in order to give the water on the previously processed side enough time to activate further into the PSS 20 film under the graffiti.

Always adapt the water pressure to the surface!
The surface must never be damaged by using a water pressure that is too high. Clean hard surfaces, such as granite, with higher pressures (50-100 bar) or (725 - 1450 psi) at the nozzle. Clean soft surfaces, such as sandstone, with lower pressures (10-20 bar) or (145 - 290 psi) at the nozzle. (Stated pressures are only suggestions and actual pressure can only be determined by site conditions) Keep in mind lower pressure usually means less clean up time as the loose pieces of graffiti can blow further with higher pressure.

After the removal of the graffiti, the complete processed surface should be once again washed thoroughly with hot water. Porous surfaces should then be immediately re-coated with PSS 20 while they are still wet. In doing this, re-apply the PSS 20 in the necessary number of coats and coat thicknesses as outlined in this document. At the borders of the cleaned surfaces, PSS 20 should be sprayed so as to overlap with the surfaces that are already protected. With non-porous and non-absorbent sub-surfaces, allow the surface to dry before starting to apply the new protective film.

5. Packaging

25 liter (6.6 gal) containers

6. Storage

Shelf life is approx. 12 months in a sealed unopened container under cool, frost-free conditions. Protect from heat and direct sunlight. Refrigerate after opening for best shelf life.

7. Hazardous substances ordinance class

n/a

8. Transport hazard class

n/a



9. Disposal

EC Waste Code no. 06 02 99

Any residues must be emptied out of containers before recycling.

10. Safety instructions

PSS 20 is very slippery in its liquid and/or damp state. PSS 20 should therefore only be used on vertical surfaces. If PSS 20 is dropped onto the floor, it must be immediately removed or be washed away immediately with plenty of water in order to avoid accidents through slipping. Protect the eyes and skin from splashes. Keep out of reach of children.

Product code: M-SK 02

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