

- In-depth waterproofing and protection slurry
- Applied to positive or negative pressure concrete face
- Permanently active
- Approved for drinking water structures
- Grey

PRODUCT DESCRIPTION:

Pro-Struct 547 Super is a cementitious, ready-mix, in depth waterproofer. Pro-Struct 547 Super is based on grey Portland cement.

AREAS OF APPLICATION:

- Substrate: Concrete
- Active or passive waterproofing and protection against water and moisture
- Foundations, slabs, retaining walls, construction joints, sewage treatment plants, swimming pools, backfilled structural elements, etc.
- Drinking water structures

PROPERTIES:

It consists of grey Portland cement, specially treated quartz sand and a compound of active chemicals. When Pro-Struct 547 Super is applied to a concrete surface, the active chemicals combine with the free lime and moisture present in the capillary tract, to form insoluble crystalline complexes. These crystals block the capillaries and minor shrinkage cracks in the concrete to prevent any further water ingress (even under pressure). However, the Pro-Struct 547 Super layer will still allow the passage of water vapour through the structure (i.e. the concrete will still be able to "breathe"). In addition to waterproofing the structure, Pro-Struct 547 Super protects concrete against sea water, waste water, aggressive ground water and certain chemical solutions. Pro-Struct 547 Super is tested for use in contact with drinking water.

COVERAGE:

STRUCTURAL ELEMENT	TYPE OF IMPACT	TYPE OF APPLICATION	COVERAGE
Concrete slab	Positive or negative water pressure	Dry sprinkle, brush or spray in 1 coat	1.2kg/m ²
Concrete slab	Moisture / no water pressure	Brush or spray in 1 coat	0.8kg/m ²
Concrete walls	Positive or negative water pressure	Brush or spray in 2 coats	1.5kg/m ²
Construction joints (horizontal and/or vertical)	Water pressure	Brush in 1 coat	1.5kg/m ²

For details, please refer to specifications.

TYPICAL PROPERTIES

Appearance	Grey powder
Workability at 20°C	Approximately 30 minutes
Setting time at 20°C	1 to 2 Hours

All data is averages of several tests under laboratory conditions. In practice, climatic variations such as temperature, humidity and porosity of substrate may affect these values.

APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

SURFACE PREPARATION:

The substrate to be treated must be sound and even, open-pored, roughened and its surface free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance have to be removed by suitable means.

Any water leaks must be stopped with Pro-Struct 548 (see application procedure below):

- Each leaking area must be cut back to sound material, leaving a chase approximately 15mm deep to receive the Pro-Struct 548.
- 1kg of Pro-Struct 548 must be mixed with approximately 0.25 litres of water with a slow speed mixer (mixing time a maximum of 15 seconds).
- Immediately after mixing, Pro-Struct 548 must be applied to the appropriate area by working into place and holding firmly for approximately 2 minutes (rubber gloves should be worn).
- Pressure is to be maintained without disturbing the material until it has set.
- Excess material must be removed by grinding.

The sealed leaks must be left for 1 hour at 25°C, after which Pro-Struct 526-MCI can be applied on a saturated pre-wetted surface.

MIXING:

Mix by volume 5 parts of Pro-Struct 547 Super with approximately 2 parts of potable water (25kg + approximately 7 to 8.5 litres) in a clean container for at least 3 minutes to a lump-free, homogenous consistency of thick oil paint. Use a mechanical mixer.

APPLICATION:

Pro-Struct 547 Super is applied with brush, suitable spray equipment or by dry sprinkling.

Brush Application:

Ensure that all cavities in the substrate are filled. Crosswise application: vertically bottom-up, then horizontally.

Spray Application:

Pro-Struct 547 Super can be applied with a suitable fine mortar spraying device. For maximum spray pattern it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approximately 4mm. The first layer of Pro-Struct 547 Super is applied in circular motion with the spray nozzle held at a 90° angle to the substrate. The final layer can be left as a spray finish or treated to a specified finish.

Apply subsequent coat whilst previous coat is still damp at the surface. The waiting time before applying the following coat depends on local climate conditions such as humidity, temperature, etc. The previous coat must not be damaged during application of the following coat.

To maintain workability of the material, do not add water, simply re-stir the mixture.

Dry Sprinkle and Power Trowel Application:

The concrete is poured, vibrated and screeded as usual. When the concrete to be treated starts to reach initial set, the specified amount of Pro-Struct 547 Super is dry-distributed by hand using a sieve (mesh size of 1mm) or suitable spreader on to the concrete surface. The powder is then trowelled into the substrate until coverage is uniform and the specific finish is achieved.

Do not apply at temperatures below +5°C or to a frozen substrate.

CURING:

Keep damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. The freshly treated surface should be protected from rain for a minimum period of 24 hours. In closed spaces and deep pits, suitable air circulation should be provided for 24 hours following the Pro-Struct 547 Super treatment.

CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS. KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NON-FERROUS TOOLS AND TO WEAR CONDUCTIVE AND NON-SPARKING SHOES.



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BACKFILLING:

Backfilling can be carried out 3 days after completion of the Pro-Struct 547 Super treatment.

PLASTERING / COATING:

Surfaces treated with Pro-Struct 547 Super which are to be coated or painted should be left to cure for at least 28 days.

At the end of the curing period, prior to the application of coatings or paints, the surfaces should be saturated with water and neutralised with diluted hydrochloric acid (1:8 / approximately 3.5%). Observe precautionary measures! Following this, the area must be thoroughly rinsed with water.

When a plaster or render finish is required on top of a Pro-Struct 547 Super treatment, it is essential to apply a rough cast of sand and cement on the final Pro-Struct 547 Super coat while it is still tacky. On hardened Pro-Struct 547 Super surfaces, apply an appropriate bonding agent before rendering.

Coatings on top of a Pro-Struct 547 Super treatment have to be alkali resistant. Decorative coatings applied on the passive water pressure side are recommended to be water vapour permeable.

FILLING OF WATER RETAINING STRUCTURES:

Filling can take place when the surface treatment has hardened sufficiently, usually not less than 14 days after application. However, if earlier filling is specifically required, filling may be considered after not less than 7 days, provided the surface is thoroughly checked for hardness. A careful cleaning and disinfection prior to the first operation is essential. Observe national laws and regulations.

PACKAGING:

25kg PE-lined paper bag.

STORAGE AND SHELF LIFE:

When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months.

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