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MASTERSEAL® 525

(Formerly sold as Brushcrete)

Polymer Modified Cementitious, Flexible Waterproofing Coating

Description of Product

MASTERSEAL® 525 is a two component acrylic modified cementitious coating that requires only on site mixing to form the ideal product to waterproof and resurface concrete, masonry, and most other construction materials.

Masterseal 525 meets the requirements of:

Water Regulations Advisory Service (WRSR) approval listing 0210531

Fields of Application

- To reface and even out variations in concrete surfaces.
- As a waterproof lining for water retaining structures.
- For coating seawater channels.
- Sealing and coating tie bar holes to ensure watertightness.
- For waterproofing & protection against brackish water.
- To provide foundation protection.
- As a waterproof coating for roofs.
- As a backing to marble and granite to prevent water ingress and thus alleviate surface staining.
- For fixing tiles in water retaining structures.
- To provide protection to concrete surfaces from carbonation and chloride attack.
- For use on pedestrian walkways in marine areas.

Features and Benefits

- A 1mm coating provides anti carbonation cover equivalent to over 80 cm of concrete.
- Waterproof-resists up to 7 Bars (70 metre head) of pressure.
- Excellent adhesion. Bonds to porous and non-porous surfaces.
- Flexible.
- Non toxic-ideal for contact with potable water.
- Breathable - whilst repelling water, allows substrate to breathe.
- High resistance to carbon dioxide and chloride ion diffusion.
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Unlike conventional coatings which require a 7-28 day cure of concrete, MASTERSEAL® 525 can be applied to 24 hour-old concrete thereby giving immediate protection.

Technical Data/Typical Properties

Composition	MASTERSEAL® 525 is composed of specially selected cements, silica sand and reactive fillers supplied in powder form together with a liquid component of blended acrylic copolymers and wetting agents.
Density	1800 Kg/m^3
Toxicity	Very Low Toxicity
Water penetration (DIN 1048)	7 bars - No leakage (2mm dft)
% Elongation	>5% (unbonded)
Water vapour co-efficient	>3.64 x 10^{-4} cm^2/s
Initial surface absorption	>95% reduction against control
CO_2 diffusion resistance	Sc >89 cms. (1mm dft) Sc - equivalent concrete thickness.
Chloride ion diffusivity	Zero penetration # 190 days
Chloride ion diffusion co-efficient	1.04 x 10^{-7} cm^2/s
Oxygen diffusion co-efficient	DO_2 7.6 x 10^{-6} cm^2/s
Chemical Resistance	MASTERSEAL® 525 has outstanding wear and weather resistance and good chemical resistance to gasoline, diesel oil, sodium hydroxide, calcium chloride, de-icing salts. MASTERSEAL® 525 coated surfaces exhibit good resistance to mild acids.

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Master Builders Technologies

Effect of water pressure

MASTERSEAL® 525 provides a protective waterproof coating. When tested to DIN 1048, MASTERSEAL® 525 was shown to resist water pressure up to 7 Bars (70 metre head).

The degree of resistance of MASTERSEAL® 525 to water under pressure depends on the coating thickness. These application rates are for continuous water pressure environments.

Pressure	Application Rate
3 Bar	4 k/m^2
7 Bar	6 kg/m^2

Chloride ion diffusivity

MASTERSEAL® 525 provides an effective barrier to water-borne salts such as chlorides and sulphates. *Independant assessment has shown that even after 190 days constant immersion MASTERSEAL® 525 eliminated chloride diffusivity totally.

Application Procedure

Feature

MASTERSEAL® 525 is available in standard 'concrete' grey and a solar reflective white. A colour matching services is available for special colours, based on minimum quantity orders.

Subsequent finishes

MASTERSEAL® 525 provides an aesthetically pleasing surface finish, texture dependant on method of application, and does not normally require any further surface finishes.

MASTERSEAL® 525 is however compatible with most forms of subsequent coatings, details of which can be obtained from Degussa Construction Chemicals UK technical services department.

Mixing

MASTERSEAL® 525 is supplied in premeasure units and should be mixed on site in clean containers. Slowly add the powder to the liquid and mix, using a slow speed drill fitted with a suitable paddle. MIX AND USE. Do not mix more material than can be used in one hour.

Note: Although MASTERSEAL® 525 is supplied in premeasured packs, part packs can be used by mixing 2 to 2.50 volumes of powder to 1 volume of liquid. Mix thoroughly and keep mixed during application. DO NOT RETEMPER WITH WATER.

Application

Damp down the concrete surface with clean water. Whilst damp, but free of standing water, apply using a short, stiff bristle brush or roller. Trowel application can be undertaken as necessary. For heavy 6-10mm depressions, honeycombs etc. use less gauging liquid and mix to the desired consistency. Where more than one coat is found necessary to achieve the desired thickness, apply the second or subsequent coats after the previous coat has dried.

It is recommended, for general resurfacing, that each coat should be a minimum of 1mm thick.

Packaging

MASTERSEAL® 525 is supplied in 20 kg packs

Storage

Store away from direct sunlight at ambient temperatures and in dry conditions.

Shelf Life

Minimum 12 months if stored in accordance to manufacturer's instructions in unopened containers.

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Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products
Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Powder Products
Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during use.

Resin Products
Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage
Chemical products can cause damage; clean spillage immediately.

Disclaimer:
This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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