



PIM+ Type S Technical Data Sheet

A PERMANENT Internal Membrane for Protecting Cement Based Materials

Product: PIM+ Type S Revised: March 2016 Last Updated: October 2025

Product Overview

Great Performance, Better Value, Best for our Planet. ISO 14001

How PIM+ Type S works

DynaCrete® PIM+ Type S is a CFIA*/BC MOTH** approved product specifically formulated to increase the density of concrete thereby increasing the life of concrete surfaces. PIM+ Type S contains proprietary materials, which make it both wetter & heavier than water. When applied to clean, damp, permeable cement based surfaces, it chases the moisture down into the concrete for 15 to 20 seconds before it starts reacting with alkali salts to form a gel that fills the internal voids of the concrete. As the gels form, materials previously in the voids, excess dissolved alkali, water, contaminants, etc., are extruded to the surface. Over 72 hours, the gels formed hydrate into silicate/glass crystals. These voids are now no longer packed with water-soluble alkali salt crystals, but are now packed with harder, insoluble glass crystals that PERMANENTLY increase the density of the concrete. The glass impregnated layer seals the concrete from surface liquids, reduces vapor transmission, (up to 98%), and increases hardness by up to 1500 PSI.

Uses

To increase the life of all concrete surfaces and ensure your concrete is easier to maintain and looks better longer.

- harder concrete resists abrasion better
- waterproof concrete resists deterioration from liquids better
- vapor proof concrete prevents moisture vapor from traveling through concrete

Applications

- Warehouse floors
- Bunker silos, milking parlors, barn floors & equipment sheds
- Retaining walls, driveways, decks, paving stones
- Concrete Bridges & Bridge Decks

Advantages - Please Read

- One soaking application is PERMANENT!
- PIM+ Type S is water based and 100 % environmentally and ecologically safe
- treated surfaces can be walked on even rained on, during their 72-hour cure time
- saves you money because you only need to have it applied ONCE!
- reduces cleaning costs, in time spent and chemicals required
- The concrete surface will last much longer!

Benefits

- Reduces or eliminates wear due to freeze-thaw and salt attack
- Reduced vapor transmission saves floor coverings/coatings from the capillary rise of moisture & salts and increases the bond of all secondary coatings
- Washed after treatment it leaves a pH neutral surface. Perfect for painting
- Leaves a clear, non-glossy finish
- Safe to handle, store and transport

Coverage

Coverage rates vary depending on the porosity of the substrate. Formed surfaces with no "fines" on the surface can be as low as 100 sq. ft. /gal. or 2.5 sq. meters/liter. Machine trowel finished floors can be as high as 225 sq. ft./gal. or 5.5 sq. meters/liter. An average of 150 sq. ft./gal. or 3.5 sq. meters/liter is common for most concrete surfaces. Always test a small area prior to application to pre-determine coverage rate (See sponge test on next page).

Instructions for Use

Surface Preparation

PIM+ Type S should be applied to clean, bare, and permeable concrete. Older concrete may require chemical or mechanical preparation (e.g., sandblasting) to remove paint, efflorescence, oil, or grease using appropriate degreasers. After cleaning, ensure the surface is dry with no standing water. Remove excess moisture with a mop or squeegee. The surface must readily absorb PIM+ Type S—verify absorbency before application.

Curing

PIM+ Type S is not a curing agent. However, when applied to concrete during the curing stage, i.e. as soon as the day after finishing, the gels formed in the internal voids slow the hydration process thus increasing the final strength, similar to "wet-sacking". As a result; a reduction in hot spots or spot drying, hairline cracking, etc. Do not apply PIM+ Type S until the concrete can be walked on without leaving any marks. Applying PIM+ Type S should not, and does not replace or remove the requirement for wet sacking.

Mixing

PIM+ Type S is pre-mixed at the factory. Do not dilute. Shake well before using.

Application Procedure

PIM+ Type S penetrates deeper and is best when applied to clean, permeable concrete surfaces at least 21 days old. If older than 28 days, clean all areas to remove dirt, oil, paint, or any materials restricting permeability. Squeegee off excess water, and repeat if necessary. Begin application once the surface is clean and prepared.

Equipment

For optimum results use a low pressure, hand-pump, "Hudson-can" sprayer. It's heavy, soaking spray ensures you get enough product down in the 15 seconds or so you have before gels form. Be aware of surface temperature. If dry, hose off the surface to ensure it is not too warm, as evaporation will reduce the amount of product available to penetrate up to a 1/2' into the concrete in the 15 seconds you have before the gels form. Apply until the surface stops sucking the material in and stays wet and shiny for at least 10 sec. To ensure full saturation, always check areas 15 to 20 seconds after application and for areas drying faster, soak again until shiny. Do Not Leave Puddles of PIM+ Type S on surfaces. Use a mop or squeegee to spread out or remove any puddles. After treating but before the surface dries, hose off the surface to remove excess product, alkali salts, and any contaminants extruded. It is easier to hose off excess material before it dries than to broom it off after it dries to a fine, 200 mesh, white powder.

Vertical Surface Procedure

Apply PIM+ Type S from the bottom up. Then hose off any excess material extruded from the top down.

Determining if a Second Application is Required

Three to four days after application the surface should be thoroughly flushed with clean water, to remove any alkali or any contaminants pushed to the surface during curing. Allow the surface to dry. Use the ASTM 4263 sponge test to test effectiveness.

ASTM 4263 Sponge Test

This procedure tests moisture vapour transmission. Tape several 12" squares of poly to the treated and dried concrete. Leave for 24 hours, then remove. If the poly or substrate beneath is wet, an additional application is required. Apply additional coats in the same manner as the first. Flush with clean water, and allow to dry between each application. Sponge test (as required) to determine the need for any additional applications. Usually if the concrete surface to be treated is permeable, clean and adequately washed to remove all alkali salts on the surface and the PIM+ type S is applied heavy enough in the first 15 seconds before the gels form, no further treatments are necessary, One heavy, soaking application is usually enough.

Back-filling foundations

12 hours after application.

Foot traffic

Is OK on the treated surface as soon as it's treated and during the 72 hour curing. Rainfall AFTER application will not harm the surface.

Applications to Repair Mortars, Patches and Overlays

Follow the same surface preparation and application procedures as shown previously. Applications to polymer modified repair mortars, patches and overlays will not penetrate as deeply as non-polymerized, alkaline substrates, but, will increase surface hardness, dust-proofing and water-proofing performance including the bond strength of secondary coatings.

Limitations

- PIM+ Type S should never be applied if the ambient temperature is expected to fall below freezing, (0 degrees C.) within 24 hours of application
- Do not apply PIM+Type S to any non-alkali bearing material, as the PIM+ Type S will not be able to react
- Do not allow over spray to get on any impermeable surface, like glass, glazed surfaces, or aluminum. Use protective coverings to ensure no over-spray or wind carried contact with these surfaces occurs
- In this happens, rinse the surface with water before the product dries, or, as the water in PIM+ Type S evaporates the liquid glass in PIM+ Type S will fuse to the impermeable surface
- Freezing will not harm the PIM+ Type S. If frozen, thaw out completely, shake well and fully remix prior to using
- PIM+ Type S is not a stain blocker. Although properly treated surfaces will not allow penetration of liquid materials below the top 1/2 mm of the surface, staining may still occur. Therefore, if a higher stain resistance is required, the application of an additional coating such as DynaCrete® PTS+ (Penetrating Top Seal), is recommended over the PIM+ Type S treated surfaces

Packaging

- 20 L / 5 US gal pails
- 208 L / 55 US gal drums

Limited Warranty

Dynacrete warrants its products to be free of manufacturing defects and that they will meet Dynacrete's current published physical properties when applied in accordance with Dynacrete's directions. There are no other warranties by Dynacrete of any nature whatsoever, expressed or implied, including any warranty of merchantability of fitness for a particular purpose in connection with this product. Dynacrete Inc. shall not be liable for damages of any sort, including remote or consequential damages, resulting from any claimed breach of any warranty whether expressed or implied, including any warranty of merchantability of fitness for a particular purpose or from any other cause whatsoever.