



# PIM+ Type S

A PERMANENT Internal Membrane for extending the life of concrete surfaces

Great Performance, Better Value, Safe for man and Animals, Best for our Planet.

ISO 14001

## How PIM+ works:

AgriCrete® PIM+ Type S is a deeper penetrating version of PIM+ formulated specifically for all concrete surfaces subject to extreme surface abrasion conditions from tires, equipment, etc., shortening the life of every farmers concrete surfaces

PIM+ Type S contains unique, proprietary materials, which make it both wetter & heavier than water. When applied to clean, dry, permeable cement based surfaces, it chases the moisture down into the concrete. In 15 to 20 seconds it penetrates up to 10 mm, where it reacts with the dissolved alkali salts inside the concrete to form a gel in the voids.

Over 72 hours, the gels hydrate forming silicate/glass crystals replacing the alkali salt crystals formerly in the voids. These voids now packed with insoluble glass crystals will PERMANENTLY increase the density of the concrete. The benefits are many: This glass impregnated layer seals the concrete from surface liquids and traps bacteria below it. There's now reduced vapor transmission, (up to 98%), and improved epoxy adhesion, with up to 3 times the surface adhesion.

**Uses** For pre-treating all cement based concrete surfaces or structures in the agricultural or farming environment prior to applying AgriCrete PTS+. I.e. **AgriCrete's 2-product system.**

This 2-product system provides our maximum protection from abrasion, anaerobic acids, lactic acids, uric acids, cleaning chemicals, etc. I.e. Barn floors, silos, bunker silos, milking parlors, feed alleys, the floors of buildings containing all manner of farm animals; pigs, chickens, dairy cows, etc.

## Advantages - Please Read

- . One soaking application is PERMANENT!
- . PIM+ Type S is "in" not "on" the concrete, so animals can be on it during 72 hour cure.
- . Safe for animals and applicators.
- . It saves you money because:
  - o **You only need to have it applied ONCE!**
  - o It reduces your costs to keep the treated surface clean, less labour, less chemicals.
  - o The concrete surface will last much longer!



Feed alleys



Barn floors



Grooved Concrete



Bunker silos



Vertical silos



All farmyard Concrete Surfaces

- o Reduces damage from salt attack.
- o Reduces vapor transmission up to 98% and the capillary rise of moisture & salts.
- o increases the bond of all secondary coatings, I.e. epoxy, etc.
- o Washed after treatment it leaves a pH neutral surface.
- o Stops calcium chlorides etc. from coming to the surface and mixing with liquids, I.e. no new barn syndrome, no animal feet problems from standing in a calcium chloride bath!

## Coverage

Coverage rates vary depending on the porosity of the concrete; Formed surfaces with no "fines" on the surface can be as low as 100 sq. ft. per gallon. Machine trowel finished floors can be as high as 225 sq. ft. per gallon. An average of 150 sq. ft. per gallon is common for broom finished and most other concrete surfaces.

**You can 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 is best when applied to surfaces, which have had the alkali salts, dirt, etc., pressure washed off. Allow the concrete to dry to at minimum, the damp stage.

**Older concrete surfaces:** may require chemical or mechanical means (sand blasting?) to remove any paint, efflorescence, etc., and may require the use of a degreaser to remove oil, grease, etc., to get down to bare, permeable concrete. Once clean, **the surface should be dry prior to the application of PIM+ Type S.**

Ensure no puddles remain. Remove excess water with mop or squeegee. Prepared surfaces should readily absorb PIM+ Type S, but pre-test slab for absorbency.

**New concrete surfaces:** usually only require the surface alkali be hosed and squeegeed off the surface to be treated.

### Curing

PIM+ Type S is not a curing agent. When applied to concrete during the curing stage, I.e. as soon as the day after placing, 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 until the concrete can be walked on without leaving any marks. Applying PIM+ should not, and does not replace wet sacking.

### Mixing

Do not dilute PIM+ Type S. **Shake well before using.**

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## Application Procedure

PIM+ Type S is best applied to dry, clean surfaces.

It can be applied to concrete ~~as soon as you~~ can walk on it, i.e. 1 day old.

If older than 28 days pressure wash all areas to be treated to remove surface alkali, and clean to remove dirt, oil, paint, etc., restricting permeability. Squeegee off the water, and repeat if necessary.

Begin to apply PIM+ Type S when the surface has dried to at minimum the damp stage.

**Equipment:** For optimum results use a low pressure, hand-pump, "Hudson-can" sprayer. It's heavy, soaking spray ensures you get enough product down for maximum penetration 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 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 wet and shiny.

### Do not leave puddles of PIM+ Type S on the surfaces treated.

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. Hose off excess material before it dries to a fine, 200 mesh powder.

**Vertical Surface Procedure:** Always, from the top down, hose off the wall to remove surface alkali.

Apply PIM+ Type S from the bottom up.

## ASTM 4263 Sponge Test

This procedure tests moisture vapor 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 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 and animal 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.** It requires an alkali based surface to 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.

If this happens, rinse the surface with water ASAP, i.e. before the product dries, or before the water in PIM+ Type S evaporates, otherwise the liquid glass in PIM+ Type S will fuse to the impermeable surface.

Freezing will not harm PIM+ Type S.

If frozen, thaw out completely, shake well and fully remix prior to using.

PIM+ Type S is not a stain blocker.

Properly treated surfaces will not allow penetration of staining materials below the top 1/2 mm of the surface. Therefore, if a higher stain resistance is required, the application of an additional coating such as AgriCrete® PTS + (Top Seal), is recommended over the cured, PIM+ Type S treated surfaces. .

## Packaging

- ① 20 liter pails
- ① 208 liter drums

#### LIMITED WARRANTY

AgriCrete warrants its products to be free of manufacturing defects and that they will meet AgriCrete's current published physical properties when applied in accordance with AgriCrete's directions. There are no other warranties by AgriCrete of any nature whatsoever, expressed or implied, including any warranty of merchantability of fitness for a particular purpose in connection with this product. AgriCrete 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.