

PIP VM-BW

Block & Wall Silicate



7875 Bliss Parkway North Ridgeville, OH 44039
440-327-0015 440-353-0549 - FAX

DESCRIPTION:

PIP VM-BW is a clear subsurface treatment developed to create a permanent, dense colloidal gel that extremely limits permeability when used vertical concrete or concrete block. **PIP VM-BW** penetrates the concrete substrate and reacts with free alkali and/or alkaline hydrates internally producing a silica hydro-gel that fills the micro spaces and voids around aggregate or in block. This hydro-gel permanently seals the matrix limiting water and vapor movement.

USES:

PIP VM-BW is designed for use where the need exists to permanently hydrostatically seal the vertical concrete structure from within. It can also be installed where more concrete density needed, or additional bonding strength is required. **PIP VM-BW** was designed for use on new or old concrete installations and reduces the potential for internal chemical reactions by converting alkali to a neutral compound structure. The use of **PIP VM-BW** will also help protect concrete from damages caused by freeze-thaw cycles, especially where salt or calcium chloride has been or will be used.

PIP VM-BW can help prevent peeling, cracking and loss of bond caused by capillary moisture and internal chemical reactions.

ADVANTAGES:

- Limits moisture and vapor transmission
- Penetrates walls 2" to 3"
- Permanently integrally seals concrete
- Preserves matrix integrity
- Increases surface abrasion resistance
- Adds density
- Improves thermal resistance
- Increases strength
- Improves past carbonation effects
- Zero VOC/VOS content
- Improves acid/chemical resistance
- Lowers internal chemical reaction potential
- Lowers creep potential
- Lowers electrostatic discharge potential
- Hardens surface
- Maintains pliability
- Resists fungus and mildew
- USDA Compliant for use in food processing areas

APPLICABLE STANDARDS:

- PIP VM-BW** meets or exceeds the following standards:
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 - ASTM C-67 Section 7 - Water absorption
 - ASTM-67 Section 9 - Suction
 - ASTM C-67 Section 10 - Efflorescence
 - ASTM C-666 - Freeze-thaw resistance
 - ASTM C-23-69 - Artificial weathering
 - ASTM C-666 - Salt attack resistance
 - AASHTO T260 - Chloride ion content
 - AASHTO T259-78 - Chloride ion penetrations
 - VOC/VOS Compliant

PRODUCT COVERAGE:

Coverage rate, depending on porosity, is 50±100 sq. ft. per gallon or 1.17m² - 2.3m² per liter

PRECAUTIONS:

- Spills or spray droplets in contact with glass should be removed immediately by flushing with water. **DO NOT ALLOW TO DRY**, as etching can occur.
- Some discoloration of polished aluminum can occur.
- Do not apply **PIP VM-BW** when air and/or substrate temperatures are less than 37°F/2.8°C and will not decrease to less than 37°F/2.8°C for 6 hours.
- For proper seal, concrete block should have 8% to 12% cementitious (Portland Cement) content.
- Do not use in very high moisture transmission situations without prior approval by Protective Industrial Polymers Technical Department.

JOB CONDITIONS:

- Do not apply **PIP VM-BW** when air or substrate temperatures are less than 37°F/2.8°C or may reach this temperature within 24 hours of application
- Contact with glass, stainless steel or aluminum should be avoided and immediately flushed with water if contacted
- **DO NOT ALLOW TO DRY** on glass, as etching can occur
- Some discoloration of aluminum can occur if contacted
- Concrete block must have 8% to 12% Portland cement content.

APPLICATION PROCEDURE:

1. Cracks and joints should be sealed with **PIP JF-Epoxy** or **PIP JF-Polyurea** (time permitting apply after **PIP VM-PR**).
2. It is highly recommended and best practice to clean and remove as much concrete dust as possible prior to application of the VM-BW. This is best done by sweeping and vacuuming.
3. To achieve deepest penetration and reaction into the slab, the concrete can be dampened with water by using the same sprayer set up and technique used to apply the VM-BW as seen below. Do not puddle water.
4. Apply **PIP VM-BW** with a high pressure airless sprayer using a 0.17 - 0.19" degree fan tip within 15 minutes of dampening the concrete for best results. Position the spray tip approximately 8"-10" (200-300mm) from the concrete surface, using an overlapping spray pattern. Apply at a rate of 200 sq. ft per gallon (5 SM/L) by applying in two passes applying the second pass immediately after the first has penetrated the surface (normally 5 to 20 minutes). **DO NOT ALLOW TO DRY**. Apply the second application at 90° to the first (cross shape).
5. Completely saturate the substrate but **DO NOT PUDDLE**.
6. Application on inclined or pitched surfaces should begin at the lowest elevation and proceed to highest.
8. Wait until purging has stopped (up to 72 hours on new concrete) before applying **PIP VM-PR**, and **PIP VM-IP**.
9. Displaced or purged contaminants, minerals or liquids must be thoroughly washed or mechanically removed prior to the application of **PIP VM-PR** or other coatings.
10. Active water or hydrostatic movement on walls or floors will require additional applications applied immediately following the first and continuing until transmission stops.

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CLEAN-UP & SAFETY: No special clothing, breathing apparatus, goggles or gloves are necessary, but in enclosed areas it is advisable to wear an appropriate respirator to avoid possible irritation to breathing.

Attention should be made to watches, eyeglasses etc., as **PIP VM-BW** can etch glass or discolor aluminum if allowed to dry.

Clean all equipment using water and mild soap. Never store spray equipment without cleaning and following manufacturer's recommendations for storage between usage.

SHELF LIFE: Self life is indefinite provided containers are kept tightly sealed when not in use.

PACKAGING: **PIP VM-BW** is available in 5 gallon/18.9 liters and 55 gallon/208.2 liters drum size.

PIP VM-BW is also available in bulk containers.

TECHNICAL SUPPORT: For application questions, please contact your salesman or PIP technical service at 440-327-0015.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Protective Industrial Polymers Inc. warrants that goods shipped will conform to the manufacturer's written specifications. Protective Industrial Polymers accepts no responsibility or liability for consequential damage resulting from failure in performance regardless of whether or not our products are found to conform to our specification or have failed due to other means. Liability is limited to the supply of replacement product for only the areas proved to be defective. The term of limited warranty shall be one year from date of purchase of materials. Installation of all products purchased must be by approved professional installers recognized by Protective Industrial Polymers. Contact your sales representative or Customer Support for confirmation of contractors. A modification to any component nullifies any warranty. Proper record of field conditions must be maintained by the installer (I.E. surface and atmospheric conditions, usage rates, and lot numbers of product installed). Protective Industrial Polymers reserves the right of inspection of any installed product, installation and maintenance records and may conduct additional testing as is reasonably required to determine cause. Warranty is only in force for products or materials that have been paid in full.

Protective Industrial Polymers disclaims liability for incidental and consequential damages resulting from a breach of any warranty, expressed or implied including damages caused by, but not limited to, the following: Acts of GOD including fire, flood and warfare, Building or structural weakness including settling, casualty, or accident, Exposure to destructive chemicals not specified in the proposal or processes, Gouging of the floor coating surface by not providing reasonable protection and maintenance or any improper use of the floor, Facilities equipment and machinery being installed after floor system was applied, Business interruption, Premature use of floor without proper cure period, Damages by acts of others to property and personal. Moisture Vapor Transmission (MVT) and ASR (Alkali Silica Reaction) Disclaimer and Exclusion: Although rare, some floors at or below grade level are sometimes subjected to saturation by moisture from beneath the concrete floor slab. This moisture can travel through the concrete and collect between floor toppings creating the potential for delaminating from hydrostatic pressure and or ASR. Conditions contributing to this include heavy rainfall, broken pipes, excess hydration within fresh concrete, and other factors or defective and old concrete. These factors are difficult, if not impossible to predict. Protective Industrial Polymers recommends testing for MVT and/or the presence of ASR in the concrete substrate prior to applying any polymer floor topping. The recommended test method for MVT utilizes calcium chloride test kits. ASR can be predicted by a higher than normal pH within the concrete. If high pH should be detected, it is recommended a lab test for ASR. If and when delamination of the floor occurs because of a moisture condition that exists beneath or in the concrete slab or failure of the concrete due to ASR, this Limited Warranty does not extend to such delaminating or topping failure.

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