



PlasterMax PIF™

Best Practice Guide

PlasterMax™ PIF Installation Specifications

Interior Finish Coat - Insulated Concrete Form

Description

PlasterMax™ PIF is a state-of-the-art abuse resistant veneer coating specifically formulated as an interior wall finish coat over **PlasterMax PIB**. **PlasterMax™ PIF** is installed in two or three applications to achieve a 1/8" minimum veneer. When installed properly, **PlasterMax™-IND** provides twice the resistance to abrasion than standard CMU block. **PlasterMax™ PIF** conforms to ASTM E136, ASTM E84, ASTM G21 and NFPA 286.

Climate



CAUTION

The objective in controlling the interior climate of the building is to assist **PlasterMax™ PIF** to cure naturally and perform as intended. Premature surface drying may cause surface cracking and compromise the performance characteristics of **PlasterMax™ PIF**.

Temperature

PlasterMax™ PIF must be applied on interior walls with a minimum surface temperature and ambient room temperature above 50°F. In colder environments the building shall be heated long enough to bring the surface temperature of the substrate above 50°F and maintained until **PlasterMax™ PIF** has sufficiently cured.

In warmer environments the building shall be cooled long enough to bring the surface temperature of the substrate below 85° and maintained until **PlasterMax™ PIF** has sufficiently cured. Do not apply **PlasterMax™ PIF** in ambient temperatures above 95°F.

Humidity

The building must have a minimum relative humidity shown in **Table 1** to avoid premature surface drying and promote consistent curing. If low humidity conditions exist for a given ambient temperature then measures must be taken to increase the relative humidity for the duration of the **PlasterMax™ PIF** application and curing period.

Temp	50°F	55°F	60°F	65°F	70°F	75°F	80°F	85°F	90°F	95°F
Min. R/H	20%	22%	25%	30%	35%	40%	48%	58%	65%	70%

Table 1 - Humidity Minimums

Ideal Drying

Ideal conditions for **PlasterMax™ PIF** application are 73°F with a 50% relative humidity. The general rule of thumb for identifying good drying conditions is the lower the temperature, the lower the humidity needs to be. Conversely, the higher the building temperature, the higher the relative humidity should be for proper material curing.

Air Movement

Opening windows and/or assisting air movement with fans can greatly assist in maintaining good drying conditions within a building. In excessively hot and dry areas, minimize air movement across the applied walls and add moisture by wetting the floor. Humidifiers or other mechanical means of increasing room humidity may have to be used.

In high humidity areas, increase air flow within the building where **PlasterMax™ PIF** is being installed. Excessive air movement directly on the surface of the **PlasterMax™ PIF** may prematurely dry the surface and create surface cracks. Avoid direct air movement on the **PlasterMax™ PIF** surface when using fans or other means of climate control.

Substrate Preparation

Basecoat

Inspect the basecoat thoroughly before applying **PlasterMax™ PIF**. Ensure that any loose material is removed and that the basecoat is sufficiently set.

PlasterMax™ PIF may be directly applied to the basecoat without the use of bonding agents or primers. It is acceptable to “fog” or mist the basecoat surface with water to prevent suction issues. This practice is generally used when the basecoat is allowed to completely dry prior to the finish coat application. Do not saturate the basecoat with water.

Mixing Station

It is recommended to take the time to establish a well organized mixing station. Batching accurately and efficiently will keep the installation on schedule and profitable. The following list provides a checklist for necessary items and practices:

- Tarp off the entire mixing area for easier cleanup
- Water hose or suitable water source
- Power source with GFI receptacle kept away from water usage
- Spare mixer available in case one fails
- Weight scale (optional)
- Graduated water containers for measuring
- Plastic barrel for quickly drawing clean/potable mixing water
- Additional plastic barrel for rinsing/cleaning
- Level surface at “bench” height for measuring water
- Designated area for stocking dry product
- Trash barrel or designated area for opened bags and Trash

Measuring the Water



Accurately measuring the water content per unit of **PlasterMax™ PIF** is critical. Under watering will diminish workability where over watering will diminish overall performance and strength. Precise water amounts are scientifically calculated in pounds of water per 50 pounds of dry pre- blended **PlasterMax™ PIF** ingredients. These values are easily translated into fluid ounces/gallons as in **Table 2**.

No. of Bags	1	2	3	4	5	6	7	8	9	10
Pounds/Water	6.32	12.64	18.96	25.28	31.6	37.92	44.24	50.56	56.88	63.2
Quarts	3 qt	6 qt	9 qt	12 qt	15 qt	18 qt	21 qt	24 qt	27 qt	30 qt

Table 2 - Water Values per 50# of PlasterMax™ PIF

Mixing Equipment

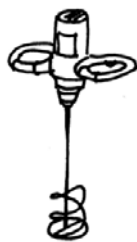
Mixing **PlasterMax™ PIF** is easy but can be made difficult without the right mixing equipment.



Mixing should be done with an electric heavy duty ½" drill capable of 500-600 rpm.

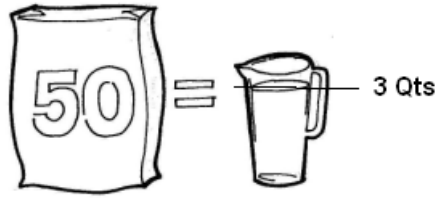


Standard mixing paddles are used with heavy duty ½" drills for bucket batching.

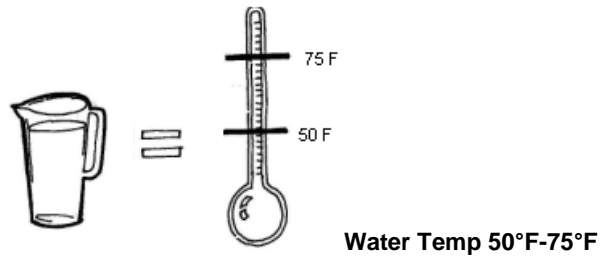


Direct drive mixers are ergonomically designed and minimize torque reduction that increases batch efficiency. Most are equipped with variable speed options that reduce product overflow while blending the dry product with mixing water. Direct drive mixers are recommended over heavy duty ½" drills for bucket mixing.

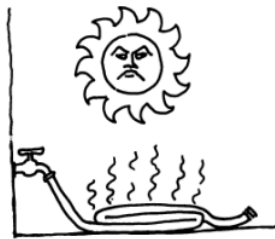
Mixing



Add approximately three (3) quarts of clean, potable water per 50 lb. package of dry **PlasterMax™ PIF**. Always add the total water amount to the mixing vessel before adding the dry material. It is recommended to use exact measuring equipment to duplicate water amounts for each batch mixed.



Avoid using water less than 50°F and more than 75°. Higher water temperatures will greatly reduce working time and overall workability. Lower temps will slow the set time and reduce application efficiency.



DO NOT draw mixing water from water hose exposed to the sun or any other heat source.



Adjust mixing water temperature with a cold water source or add ice if necessary. Mixing water temperatures must not exceed 75°F.

DO NOT ADD ICE DIRECTLY TO THE MIXTURE



4 Minute Mixing Time

PlasterMax™ PIF requires less water than typical veneer plasters. It is extremely important to allow sufficient time for the product to adequately dissolve and liquefy. Mixing time is approximately 3 to 5 minutes with the ideal target being 4 minutes. Some of the **PlasterMax™ PIF** ingredients trap mixing water before releasing it back into the blend. **DO NOT ADD MORE WATER BEFORE INITIAL MIXING WATER HAS BEEN RELEASED.**

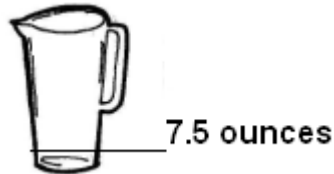
Mixing method

It is recommended to add the total water amount to the mixing vessel first and add approximately half of the **PlasterMax™ PIF** to the water. Slowly mix the added material. Once mixed add the remaining **PlasterMax™ PIF** and mix for 1 minute. Stop mixing and allow to mixture to absorb and release the mixing water for approximately 1 minute. Resume mixing for an additional 2 minutes until a smooth, lump free consistency is met.



Optional Mixing Method Mixing may also be achieved by continuously mixing the material for 4 minutes.

The most common mistake is adding more water before all dry ingredients have absorbed and released the mixing water. **PlasterMax™ PIF always appears like it does not have enough mixing water initially.** Continue mixing regardless of its stiff appearance. Small amounts of water may be added to the batch after 4 minutes of mixing. The maximum amount of additional water is 7.5 ounces.



- DO NOT TEMPER AFTER MIXING HAS TAKEN PLACE.
- DO NOT ADD MORE THAN 7.5 OUNCES OF ADDITIONAL WATER
- DO NOT MIX TO FAR AHEAD OF THE APPLICATION

Application

The overall objective is to achieve a minimum 1/8" smooth veneer that is flat and plumb- providing excellent abrasion resistance. There are two suggested methods that may be employed.

Two Coat Method

Apply a scratch coat of **PlasterMax™ PIF** over the basecoat and immediately double back with more material from the same batch. Continue over the entire wall surface until a 1/16" minimum thickness is achieved.

Attention needs to be given that no trowel lines are left and the material is applied flat and plumb. Ensure that this application is not smooth troweled- allowing for a mechanical key for the second coat.

Allow the first coat to set before applying the second coat. Overnight drying is not necessary.

Apply the second coat in the same manner as the first. Remove all trowel marks and imperfections by using light trowel pressure when the material has begun to stiffen. Water may be used but sparingly. Overwatering and over troweling is not recommended as blistering may occur-especially over low suction bases. Blisters can be eliminated by final water troweling practice.

Three Coat Method

Apply a tight (thin) coat of **PlasterMax™ PIF** over basecoat- achieving and minimum thickness between 1/32" and 1/16" per coat. Continue the application until the entire surface area is covered.

Attention needs to be given that no trowel lines are left and the material is applied flat and plumb. Ensure that this application is not smooth troweled- allowing for a mechanical key for the following coat.

Once the first coat is set, re-apply a second coat **PlasterMax™ PIF** in the same manner. Overnight drying is not necessary.

The final coat may be applied once the second coat is set. Attention should be given to the final coat finishing as the thinner **PlasterMax™ PIF** coats dry more quickly than they do with the two coat method.

Remove all trowel marks and imperfections by using light trowel pressure when the material has begun to stiffen. Water may be used but sparingly. Overwatering and over troweling is not recommended as blistering may occur-especially over low suction bases. Blisters can be eliminated by final water troweling practice.

Note:

The three coat method has overall advantages over the two coat method with respect to the final finish.

- Tighter (thinner) coats lead to quicker set times enabling the application to be continuous.
- Wall plumb and flatness are more controlled
- **PlasterMax™ PIF** 1/8" final thickness is easier to monitor and achieve
- Overall Application time parallels the two coat method

Delivery Systems / Spray Equipment

PlasterMax™ PIF may be applied by hand trowel, hopper gun texture sprayer or peristaltic pump/spray equipment. When using spray equipment, it may be necessary to adjust the air flow rate, nozzle orifice size and feed rate to maximize application efficiency. Adjust application speed in order to achieve the desired application depth and aesthetic affect. Testing spraying/pumping equipment and material prior to installation is strongly recommended.



Hopper Gun

Hopper texture guns may be used to apply **PlasterMax™ PIF**. Hopper guns are typically used for smaller volume projects and are typically used for producing textures such as orange peel, splatter and splatter knock downs. A Marshalltown Sharpshooter 693 is recommended when considering hopper gun applications.



Peristaltic Pump

or “Squeeze Pump”

Peristaltic pumps offer automation to the installation and greatly increase application efficiency. Material never interfaces with pumping parts reducing the set up /wash out time. Peristaltic pumps deliver material safely and effectively. Various output options and sizes are available.

Surface Protection and Decoration

Paint

Wall paint is most commonly used to seal, protect, and provide a consistent decorative finish to cured **PlasterMax™ PIF**. Breath able latex primers and paint typically used for conventional veneer plasters are recommended after a minimum 3 day cure period. In cooler and/or more humid environments additional cure time may be needed before painting. Consult with a GigaCrete technical assistant with cure rate questions.

Primer

Sherwin Williams PrepRite 200 Latex Primer or equal is recommended.

Clean Up

All mixing and finishing equipment must be thoroughly washed immediately after use. Potable water is sufficient for cleaning.

Curing

Drying and curing times may vary due to temperature and humidity differences from one location to another. It is important for **PlasterMax™ PIF** to be fully dry before applying any surface treatment or decoration. Questions regarding drying and curing may be directed to GigaCrete technical assistance representative.

Limitations

1. **DO NOT OVERWATER**, as this may lead to product failures.
2. **DO NOT** temper the material with additional water after initial mixing as this may lead to product failures. Stiffening **PlasterMax™ PIF** must be discarded if it becomes unworkable.
3. Use water only between 50° F and 75° F
4. Do not add ice directly to the mixture
5. Previously opened, torn or damaged bags must be discarded and not used.
6. The entire content of each bag must be mixed at one time.
7. **PlasterMax™ PIF** is not recommended for exterior use.
8. Not recommended where subject to weathering or direct water contact
9. **PlasterMax™ PIF** is subject to cracking under rapid drying conditions which may be caused by low humidity, high temperatures, direct sunlight, and excessive draft.
10. When using the “fog” or mist practice – do not overwater or saturate the basecoat.

Coverage

One 50 lb. (22.6 kg) bag of **PlasterMax™ PIF** covers approximately 40 square feet at 1/8” thickness.

Packaging

PlasterMax™ PIF is packaged in 50 lb. (22.6 kg) moisture resistant sealed plastic bags.

Storage

PlasterMax™ PIF bags should be stored in a secure, indoor and dry space. It is important that bags maintain their seal and are free of puncture or tear. **PlasterMax™ PIF** should be brought to room temperature 24 hours prior to being mixed and applied.

Shelf Life

When properly stored in original sealed packaging, **PlasterMax™ PIF** has a shelf life of one year from the date of manufacture.

Tech Support

Contact GigaCrete, Inc. at (702) 643-6363 (PST) or (508) 636-1976 (EST)

Warning!

Keep out of reach of children.

Trade Marks.

PlasterMax, GigaCrete, and Build Strong. Build Forward. are registered trademarks owned by GigaCrete, Inc.

Practice Safety! Follow good safety and industrial hygiene practices during the handling and installation of products. Take necessary precautions and wear appropriate personal protective equipment as needed. Read material safety data sheets and related product literature prior to specification and installation.