



APPLICATION INSTRUCTIONS

IMPAX™ WB+

Fluid-applied, single component asphalt emulsion

1. PRODUCT DESCRIPTION

- 1.1 ImpaxWB+ WATERPROOFING is a fluid-applied, single component, polymer-modified asphalt emulsion. This material was specifically designed for spray application on below grade exterior foundation walls. ImpaxWB+ can be applied to poured concrete foundations and parged concrete block.
- 1.2 Proper installation is critical to ensuring the quality of membrane performance. ImpaxWB+'s application instructions are outlined in the following text and should be strictly adhered to during all phases of application.

2. STORAGE

- 2.1 ImpaxWB+ Waterproofing, like all asphalt emulsions, must be kept from freezing. It is best to store ImpaxWB+ off the floor at an ambient temperature above 50° Degrees Fahrenheit (F). Opened drums should be tightly sealed before storage to avoid a skin developing on top of the liquid.
- 2.2 When shipping emulsion-based products during winter months, there is always a risk of the material freezing while in transport. The risk is much higher on shipments of less than 40 drums because these shipments go as "less than truckload" and therefore do not go directly from our warehouse to yours. If you suspect that a shipment has been exposed to temperatures below freezing, you can easily inspect the material yourself. Insert a pole or stick through the bung opening and check for "chunks" or debris. If none is detected, the material should be fine to spray. If you are still uncertain, contact your Tremco Technical Representative.

3. SAFETY

- 3.1 Use the following safety instructions when handling ImpaxWB+. Also review the Material Safety Data Sheet (MSDS), as well as the safety precautions provided by the spray equipment manufacturer.
 1. Avoid direct contact with the material. Prolonged or repeated contact can cause skin irritation. If prolonged contact is anticipated, impervious gloves should be worn.
 2. In a confined space at temperatures less than 212° F, sufficient vapors can accumulate and flash if a source of ignition is present. The product will not support sustained combustion and will not burn under normal circumstances.
 3. Mist from spray application in a confined area can cause a headache, nausea, and irritation of the nose, throat and lungs. To prevent this, a NIOSH approved respirator for ammonia must be worn per the MSDS.
 4. To protect eyes from contact with high-pressure spray, wear chemical safety glasses with side shields. If contact with eyes, occurs, flush with large amounts of cool water while holding eyelids open. Get medical attention if irritation persists.

4. APPLICATION INSTRUCTIONS

Preparation

1. Surfaces to be coated must be clean, smooth, firm, free of dust, mud, loose mortar, wires, fins, metal projections or any other substances which might prevent placement and bonding of a continuous film. Take particular care to ensure that the footing and cove are clean.
2. On poured concrete walls, remove wall ties on outside and inside of wall.
3. On poured concrete walls, tie holes and other small voids can be patched with an asphalt-based mastic. Block walls must be parged.
4. For poured concrete walls or block walls, repair and/or parge any cracks, honeycombs, or large voids in the wall or footing with grout. (Non-shrinking grout is preferred, i.e. ThoroSeal Waterproofing or 50/50 mix Waterplug and cement.)
5. ImpaxWB+ may be applied to damp or green concrete. However, the product must not be applied over standing water, or a water film, or ice or snow.
6. Before waterproofing a monolithic slab/footing foundation (where the floor slab and footing are all a single slab), call your Tremco Technical Representative at 800-876-5624.
7. Consult ImpaxWB+'s "Builder's Guide to Ensuring a Dry Basement" for the best ways to waterproof lintels (long masonry blocks that provide support over the ditch for attachments to the foundation walls). If the lintel is already attached to the foundation, check around, beneath and between (if 2 lintel blocks are used)

to make sure all gaps in the mortar work are filled. Finally, apply ImpaxWB+ WATERPROOFING to both sides of the lintel and walls on top of the lintel to grade and extend this waterproofing one block beyond the end of the lintel.

8. The concrete foundation must be of such strength and design to ensure structural integrity. Foundation walls must be properly cured according to the local building code regulations. If these are not available, consult the Concrete Foundation Association for specifications.

5. IMPAXWB+ APPLICATION

1. ImpaxWB+ can be applied to surfaces down to 20° F. Material temperature at application must be between 130° F and 160° F. Do not exceed 165°F.
2. To ensure proper temperature at the spray gun, insulate the lines and the pump housing of the spray apparatus. When spraying below 50° F ambient temperature, it is highly recommended to have your equipment and material enclosed in a heated compartment.
3. Spray ImpaxWB+ in a pressure range between 2300 and 2800 pounds per square inch (psi). For best results, use a 0.35" spray tip. Do not use any tip larger than 0.39".
4. The black membrane, or flex coat, should be applied to a minimum of 60 mils wet. This will cure to a dry film thickness of 40 mils. Use a wet film mil gauge to ensure proper application thickness. For poured concrete walls, a maximum coverage rate of 25 ft²/per gallon will yield the desired wet mil thickness at application.
5. Careful attention must be taken during the application process to ensure a consistent, homogenous membrane. Extra coating should be applied to voids or honeycombed areas, changes in plane including joints between footing and wall, tie holes, form joints, cold seams and other rough areas. For best results, apply ImpaxWB+ using a two-coat technique. Spray the first tack coat horizontally along the entire length of the wall. Spray the second coverage coat vertically to the required wet mil thickness. This technique will help to optimize the coverage rate and ensure a uniform mil thickness.
6. Inspect the sprayed wall thoroughly for pin holes, blisters or other voids in the membrane. If any are detected, lightly re-spray until a monolithic coating is achieved.
7. After application, applicator must verify that:
 - a. Adequate foundation drainage system is installed (See "Drainage Requirements").
 - b. All penetrations (water, sewer, etc.) have been sealed.
 - c. Backfill does not exceed the level of the waterproofing system.
 - d. Grade slopes away from the foundation.
8. Applicator must pass the responsibilities in number 7 on to the builder or general contractor. If the applicator does pass these responsibilities on, be sure the builder or general contractor is aware of these responsibilities.

To waterproof penetrations, the voids around the penetration must be filled with non-shrinking grout then the penetration area and approximately one foot of pipe must be sealed with an elastomeric membrane.

6. DRAINAGE REQUIREMENTS

- 6.1 In order to qualify for the 10 Year Limited Warranty, a proper drainage system must be installed. ImpaxWB+ requires a positive interior or exterior drainage system consistent with local, good construction practices. An exterior drainage system consisting of a 3" minimum, perforated drainage pipe, and gravel over the pipe, on to the footer and at least 10" up the face of the vertical wall is recommended. The drain tile must channel the water to either an operating sump pump or to daylight. The grade should always slope away from the structure.

7. EQUIPMENT RECOMMENDATIONS

- 7.1 Emulsion-based products require some special handling in order to optimize their application. Below are listed some equipment recommendations and a "trouble shooting" section should any spray problems arise.

8. EQUIPMENT SET-UP

1. A pump capable of spraying 3000 psi is required. The GRACO #733 or GRACO #533 pumps work well with this material. (Contact your Tremco Technical Representative for assistance with equipment purchases.)
2. The diameter and length of all the interlinking lines is critical to ensuring a good flow of material to and from the pump. The larger the diameter and shorter the length of all interlinking lines decreases the flow resistance and optimizes product transfer. The siphon line from the drum to the heat exchanger should not be longer than 4 feet if possible, and a 2" diameter is recommended. The line from the heat exchanger to the pump should have a minimum inside diameter of 1 1/4" and be no longer than 3 feet. All connections should be as tight as possible so as to not introduce air into the lines.

3. Make sure the lower piston ball check is on the high setting. Consult your equipment manual for adjustment procedures.
4. A single-pass heat exchanger connected to truck engine's coolant system is the best way to heat ImpaxWB+ to the proper application temperature of 130° F to 160° F. Many different sizes of heat exchangers have been used with good success. One in particular that produces good heat transfer is Young's Radiator Company's Model #F-605-EY-1P. Consult your Tremco Technical Representative for availability.
5. The spray hose must be a "high pressure" type, capable of taking 4000 psi. A maximum of 1/2" diameter line is accepted for the first 100 feet of hose. It should then be reduced to 3/8" for the next 50 feet. No more than 150 feet of hose is recommended.
6. Many different spray guns can be used. Best results have been achieved with GRACO's Hydra-Mastic Airless Spray Gun, Model #206-716. In colder weather (40° F and below), switching to an extrusion flow type gun such as GRACO's Silver Airless Gun, Model #208-663 is recommended. This will eliminate the concern of material building up in the spring assembly of the Hydra-Mastic Gun.

9. TROUBLESHOOTING

9.1 If you lose pressure while spraying:

1. Check all line connections for air leaks.
2. Reduce the amount of engine coolant going through the heat exchanger, but watch to be sure that the ImpaxWB+ material temperature does not drop below 110° F.
3. Flush system with Toluene, diesel fuel, or mineral spirits.
4. Spray product to test pressure.
5. If pressure cannot be maintained, take apart the lower foot valve and inspect the piston ball check. If the piston ball check moves freely and is seating correctly, take out the piston rod and inspect the packings. Replace the packings if they are damaged or worn excessively.
6. Reassemble the equipment and spray product to see if a constant pressure can be maintained.
7. If pressure still cannot be maintained, open up the heat exchanger and check for blockage. If blocked, clean thoroughly and reassemble.
8. If these procedures do not work, consult your GRACO Service Representative or Tremco Technical Representative.

10. OPERATIONAL MAINTENANCE

10.1 Consult your GRACO Service Manual for maintenance scheduling or replacement of vital parts (i.e. piston packings, ball check, etc.).

1. Many different solvents can be used to flush the system, but mineral spirits are recommended because they act as a lubricant for the leather packings in the pump.
2. DO NOT use water to flush ImpaxWB+ out of the lines. This will shock the emulsion and cause it to "break" in the lines.
3. Mineral spirits, toluene and most other solvents are flammable and/or hazardous. Be sure to check with the suppliers of these solvents for the correct safety and handling procedures and follow the suppliers' recommendations when using clean up solvents.

11. TRANSPORTATION

11.1 ImpaxWB+ is classified as a non-hazardous emulsion and does not require placarding.

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