



Installation Procedures for LIQUIDARMOR™ - CM Flashing and Sealant

OVERVIEW

LIQUIDARMOR™ - CM Flashing and Sealant is an innovative, patented liquid flashing solution designed to provide commercial buildings advanced moisture and air sealing protection. When it is used as an alternative to flashing tapes in Dow's commercial wall systems, it can decrease the labor on the job. LIQUIDARMOR™ - CM Flashing and Sealant is a key component of both the Ultra Air Barrier Wall System and THERMAX™ Wall System.

Sizes

LIQUIDARMOR™ - CM Flashing and Sealant is available in 5 gallon pails, weighing approximately 49 lbs. See Table 1 for the yield per pail at the recommended 50 ±5 wet mils application thickness.

EQUIPMENT GUIDELINES

Sprayer Selection

To spray apply, LIQUIDARMOR™ - CM Flashing and Sealant a sprayer with at least a maximum pressure delivery rating greater than or equal to 3,300 psi, a pump motor that is 2.2 hp or greater and a throughput of

at least 1.1 gpm is recommended. Sprayers that do not meet all these minimum recommendations may work. For optimal application, though, select a sprayer meeting these specifications. Table 2 names four commercially available sprayers that meet the recommended specifications.

Sprayer Tip Selection

Once a sprayer is selected for use with LIQUIDARMOR™ - CM Flashing and Sealant, select appropriate spray tips for the job. Generally, spray tip nomenclature consists of three numerical digits. The first digit communicates the relative spray width. The second and third digits provide information about the spray tips orifice size. A larger orifice size will deliver more material through the spray tip nozzle over a given time period. Such larger sized orifices work well around large opening and greater coverage widths like around penetrations or window rough openings. A smaller orifice size is recommended around small penetrations and board joints.



Table 2 provides a list of suggested sprayer tips for first time LIQUIDARMOR™ - CM Flashing and Sealing applicators. With application experience, installers typically develop their own preferences for specific sprayer tip size to reach product thickness and width targets. Variables such as actual spray pressure, spray nozzle orientation, application nozzle movement speed and application distance control many of the same parameters as the spray tip size such as product throughput and thickness.

TABLE 1: LIQUIDARMOR™ - CM FLASHING AND SEALANT THEORETICAL YIELD

Application Width (inches)	Theoretical Yield/Pail at 50 wet mil (linear feet)
2	794
3	529
4	397
6	265
8	198

TABLE 2: SUGGESTED COMMERCIAL SPRAYER AND TIPS

Sprayer	Spray Tips	Tip	Recommended Use
Graco TexSpray Mark IV		Graco XHD325	Board Joints, Small Penetrations, Windows
Graco GMAX 5900		RAC X521	Board Joints, Small Penetrations, Windows
Titan Impact Series 1140		RAC X521	Large Openings Requiring Greater Coverage Widths
Titan Advantage GPX 130		TR2 213	Board Joints, Small Penetrations, Windows
		TR2 519-521	Large Openings Requiring Greater Coverage Widths

Brush Selection

While LIQUIDARMOR™ - CM Flashing and Sealant is primarily spray applied, a paint brush is a convenient tool to have on hand to smooth out areas of over application. A 3-inch Chip Brush is recommended, providing adequate bristle strength to spread the highly viscous LIQUIDARMOR™ - CM Flashing and Sealant.

Wet Mil Gauge

A wet mil gauge will help ensure LIQUIDARMOR™ - CM Flashing and Sealant is applied at 50 +/-5 wet mils, optimizing product yields and product performance.

STEP-BY-STEP INSTALLATION INSTRUCTIONS

1. Before you begin spraying, prepare the jobsite.

Safety first!

As with any construction site, follow basic safety practices, reading and following all equipment and SDS instructions.

LIQUIDARMOR™ - CM Flashing and Sealant is not a hazardous chemical, and does not pose a respiratory hazard, when used according to instructions. It is recommended that you spray in a well ventilated area to ensure optimal product curing.

Always wear safety glasses with side shields or goggles. Note that while LIQUIDARMOR™ - CM Flashing and Sealant washes off skin and equipment with water, once cured, it adheres well to clothing, work boots and gloves.

Gloves are recommended, but not required. Prolonged exposure may cause dryness and discoloration of skin.

Ambient & Substrate Conditions

Check current outdoor temperatures and forecasted weather for the day.

Surface and ambient temperatures should be 35°F and rising and below 120°F during the application of LIQUIDARMOR™ - CM Flashing and Sealant. Do not apply the product on surfaces with standing water or frost.

While LIQUIDARMOR™ - CM Flashing and Sealant tolerates rain shortly after the curing process has begun (typically 1-4 hours), avoid installing on days with a high probability of significant rainfall.



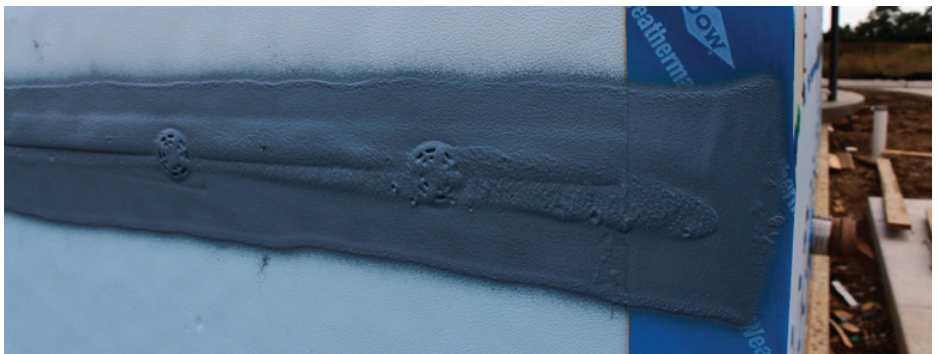
2. Check & Prepare All Installation Surfaces
LIQUIDARMOR™ - CM Flashing and Sealant can span gaps up to ¼". Seal any gaps ¼" or greater with GREAT STUFF PRO™ Window & Door Insulating Foam Sealant or acrylic caulk.

If the facer on the THERMAX™ (ci) boards was damaged during installation, be sure to note so that LIQUIDARMOR™ - CM Flashing and Sealant can be sprayed over the damaged areas once spraying

has begun. WEATHERMATE™ Straight Flashing Tape could also be used to tape down any facer flaws.

3. Flash Foam Board Joints, Penetrations, Rough Openings and/or Counterflash

As you first begin, it is helpful to first spray a pass or two of material on scrap piece of foam board or OBS to dial an appropriate sprayer pressure and check for good flow through the spray tip.



Proceed to flash board joints, penetrations and/or fenestration openings as detailed by the project drawings by spray applying LIQUIDARMOR™ - CM Flashing and Sealant at 50 ±5 wet mils in these areas. A popular technique to attain 50 ±5 wet mils is to apply the product in two passes. This is not required, though, and the target application thickness can be attained in one pass.

Be sure to follow project drawing details. LIQUIDARMOR™ - CM Flashing and Sealant is a critical component of the building envelop. Proper installation is required for the flashing to protect the building from air infiltration and water penetration as well as meet all Code requirements.

Foam Board Joints

Apply 3 inches +/- 1 inch over the joint, making sure that a minimum of 1 inch of LIQUIDARMOR™ - CM Flashing and Sealant covers each side of the joint. Fasteners and washers along the board joints should also be completely covered with LIQUIDARMOR™ - CM Flashing and Sealant. Brick anchors can installed after the application of LIQUIDARMOR™ - CM Flashing and Sealing.

Rough Openings

Extend LIQUIDARMOR™ - CM Flashing and Sealant a minimum of 3 inches onto the sheathing face, completely covering the sheathing board edge. Then, extend LIQUIDARMOR™ - CM Flashing and Sealant a minimum of 3 inches back onto the rough opening substrate. It is recommended that LIQUIDARMOR™ - CM Flashing and Sealant cover a distance back onto the rough opening equal to what is covered by traditional flashing materials.

Penetrations & Counterflashing

Apply LIQUIDARMOR™ - CM Flashing and Sealant a minimum of 2 inches onto the sheathing face and a minimum of 2 inches onto the penetration substrate or primary flashing substrate.



- Inspect work shortly after LIQUIDARMOR™ - CM Flashing and Sealant is applied.

Thickness Check

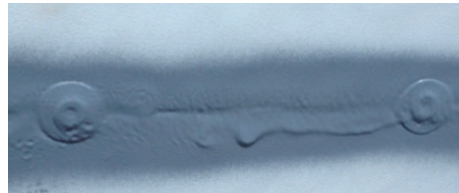
Use a wet mil thickness gauge to ensure proper installation thickness. A paint brush can be used to even out product application thickness. If product is consistently below minimum thickness, spray other pass.

Missed Spots & Fastener Washer Coverage

Check for missed spots along board joints, penetrations and rough openings. Inspect fastener and brick tie fasteners, where required to be covered, are completely covered with LIQUIDARMOR™ - CM Flashing and Sealant. Either re-spray or touch up using a paint brush.

- Allow product to cure.

LIQUIDARMOR™ - CM Flashing and Sealant will typically cure “dry to touch” within 1 to 4 hours after application. Depending on the humidity, temperature, sun exposure and wind direction, this time can be longer.



In low temperature, high humidity (> 50% R.H.) applications, allow LIQUIDARMOR(TM) -CM to cure for at least 24 hours before rain exposure.

- Inspect work after LIQUIDARMOR™ - CM Flashing and Sealant is cured.

At 50 (±5) wet mils, LIQUIDARMOR™ - CM Flashing and Sealant will cure to a dry thickness of approximately 30 mils.

Again, check for missed spots and areas where the product may have been applied too thin. While very rare, note any pinholes found in the LIQUIDARMOR™ - CM Flashing and Sealant. If any of these items are found, repair by applying more LIQUIDARMOR™ - CM Flashing and Sealant.

EXPOSURE & STORAGE INFORMATION

Once installed, LIQUIDARMOR™ - CM Flashing and Sealant can remain exposed to sunlight with no exterior cladding for 12 months.

Unused LIQUIDARMOR™ - CM Flashing and Sealant can be stored for up to 18 months.



In the U.S.

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Technical Information

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COMBUSTIBLE: THERMAX™ products should be used only in strict accordance with product application instructions. THERMAX™ products, when used in a building containing combustible materials, may contribute to the spread of fire. For more information, consult (M)SDS and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400.

WARNING: THERMAX™ insulation does not constitute a working walkable surface or qualify as a fall protection product.

STYROFOAM™ Brand Spray Polyurethane Foam contains isocyanate, hydrofluorocarbon blowing agent and polyol. Read the instructions and Safety Data Sheets carefully before use. Wear protective clothing, gloves, goggles and proper respiratory protection. Supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter is required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. Provide adequate ventilation. Contents under pressure. STYROFOAM™ Brand SPF should be installed by a trained SPF applicator.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.