



THE PECORA PROTECTS PROMISE

The Pecora Protects Promise is about more than high-quality sealants, air barriers, and traffic coatings. It's a promise to you, to your project, and to your reputation. We're hands-on and always here when you need us. Ready to make recommendations, answer questions, work through decisions, and help you find the best solution for your job. It's a promise of partnership. Pecora—protecting projects and reputations since 1862.

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DYNATHANE 800HM & 800MM

Control Joint Resin Application Manual



PECORA DYNATHANE 800MM & 800HM

CONTROL JOINT RESIN | APPLICATION GUIDE

PRODUCT DESCRIPTION

Pecora DynaThane 800 is a two-part, semi-rigid, pourable control joint resin specifically formulated to protect concrete floor joint edges against breaking (spalling) caused by the rigid wheels of industrial trucks. Pecora DynaThane 800 is offered in two versions:

DynaThane 800MM (Machine Mix) Polyurethane/Polyurea Hybrid

Packaging: 600mL 1:1 Dual Component Cartridges and 10-gallon Bulk Kits

DynaThane 800HM (Hand Mix) Bio-Based Polyurethane

Packaging: 1.25-gallon Bulk Kits

Both products are offered in Standard Gray (mixed) color. The 800HM only is available in a field tintable neutral base for use with Pecora's Universal Color Pack system. Pecora DynaThane 800 requires no primer under normal conditions, is 100% solids (will not shrink), cures to a semi-rigid hardness, and the 800MM can be applied at ambient temperatures down to -15°F (-26°C).

APPLICATION GUIDELINES

Surface Preparation

Concrete slabs should have a minimum cure of 28 days prior to joint filling. Since concrete shrinks for many months, and shrinkage results in the widening of joints, filling should always be delayed for as long as the schedule allows. If filling in refrigerated areas (coolers), the room should be stabilized at its final operating temperature for 7-14 days or longer if possible. Joints should be clean and dry.

DynaThane 800 must bond to clean, exposed concrete for the full intended filler depth. Joints must be free of saw laitance, dirt, debris, coatings, sealers, etc. The only effective means of proper joint cleaning is the use of a dry cut saw (preferably vacuum-equipped) with a diamond blade. The blade depth should extend to the intended filler depth. Run the blade against each sidewall on separate passes. After cleaning joints with the saw, vacuum any remaining dust/debris from joint. Simply "raking" debris out of joint is NOT an acceptable means of joint cleaning.

Dispensing Guidelines – 800MM and 800HM

DynaThane 800 is offered in a machine mix (800MM) and hand mix (800HM). Dispensing of the products differs and is performed as described below.

DynaThane 800MM: Pecora DynaThane 800MM is dispensed via prepackaged 600mL side-by-side dual cartridges or 10-gallon kit bulk packaging via dual component pumps (1:1 mix ratio). Both methods will require disposable static mixing nozzles. *Do not attempt to hand mix the 800MM as the working time (pot life) is extremely short (30 seconds).*



DynaThane 800MM 600mL Dual Component Cartridges will require a manual, pneumatic, or battery powered 1:1 ratio dual component gun for dispensing. Static mixing nozzles are included with the dual cartridges only. If purchasing static mixing nozzles separately they should contain 32 mixing elements and have a 1/2" inner diameter. Deviation from these nozzle specifications may affect the cure and razoring times. Consult Pecora Technical Service with any questions regarding the nozzle specifications.

600mL Dual Cartridge Dispensing Procedure:

1. Remove threaded collar and (red) plug from cartridge tip. Discard the plug.
2. Attach the static mixing nozzle by sliding the threaded collar over the mixing nozzle then secure by threading the collar onto the cartridge tip. *If work is stopped for more than a one (1) minute, a new nozzle will be required when resuming work.*
3. Place cartridge into dispensing gun cradle ensuring proper alignment and a secure fit.
4. Always extrude approximately 1 to 2 fl. oz. before starting application to avoid un-activated material entering joint.
5. Fill joints as described under Joint Filling.

DynaThane 800MM 10-gallon Bulk Kits (5-gallon Part A and 5-gallon Part B) will require dual component pumping equipment capable of dispensing the materials at a 1:1 mix ratio. There are numerous pump models currently available including single man operated and hand-held options. The pumps are predominantly electric powered with select manufacturers offering battery powered capabilities for cordless operation. Static mixing nozzles must be purchased separately and should contain 32 mixing elements and have a 1/2" inner diameter. Consult Pecora Technical Service with any questions regarding the nozzle specifications.

For dispensing of machine mix control joint resins, such as the DynaThane 800MM, Pecora recommends fixed ratio metering pumps. When selecting a pump for use, choose a model with a fixed ratio of 1:1 and a unit capable of dispensing materials with a viscosity as follows:

DynaThane 800MM viscosity:

- Part A (Base): <3000cps
- Part B (Activator): <3000cps



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Based on internal testing, Pecora can recommend the following pump manufactured by Applied Systems Technology (AST):

Pump Model: GMP-025 2020

- Horizontally mounted metering system with a 0.25 HP variable speed DC motor drive operating on 120-volt, single phase power
- Continuous flow up to 0.4gpm
- Viscosity up to 5000cps
- 0.25HP motor
- Two 6-gallon stainless steel tanks with gasketed lid and a desiccant dryer
- Use static mixer element #11081-632
- Hose: stainless steel braided, 15-foot length Teflon lined 3/8-inch diameter
- Manual dispensing gun with shut off valves and telescoping handle

Note: The GMP-050 pump can also be used if a higher dispensing rate is required. The GMP-050 utilizes a 0.50HP motor with a dispense rate of up to 0.6gpm.

Be aware that there are numerous fixed ratio pump models currently available including single man operated and hand-held options. The pumps are predominantly electric powered with select manufacturers offering battery powered capabilities for cordless operation. Contact Pecora Technical Service for specific pump recommendations or approvals in addition to the above-referenced AST model.

1:1 Pump Dispensing Guidelines

- Pump purging will be required to clear any oils from the factory for new pumps or solvent and/or previous materials from an existing pump. Pecora recommends following the pump manufacturer's procedure for purging.
- Pecora requires isopropyl alcohol for purging and cleaning. Consult Technical Service for alternate solvents.
- Hoppers, hopper screens, and hoses should be clean and free of debris.
- Pumps are to be set at a 1:1 ratio, by volume.
- Monitor the material volumes as the components are being dispensed. The levels within the hoppers should remain even as the material is dispensed. If not, check the pump settings and adjust the mix ratio accordingly.
- Pre-mix both base and activator components before adding to dispensing equipment.
- Perform periodic cure tests to ensure the proper mix ratio is being maintained.



AST GMP-025 (front view)



AST GMP-025 (rear view)

DynaThane 800HM: Pecora DynaThane 800HM (hand mix) is packaged in 1.25-gallon bulk kits exclusively and can be dispensed via a bulk caulking gun or manually poured. Other equipment necessary includes, but not limited to, proper PPE (refer to SDS), drill and mixing paddle (Jiffy paddle or equal, no flat mortar paddles), plastic mixing pails, dry silica sand, solvent (xylene, mineral spirits, MEK or denatured alcohol), clean cloths, razor scraper, and torch, if necessary.

1.25-gallon Kit Mixing Procedure: Add entire contents of Part B (activator) to Part A (base). If the field tintable neutral base is being utilized, add the Pecora Universal Color pack at this time. Mix for two (2) minutes with a butterfly mixing paddle. Scrape down sides and bottom of mixing bucket. Mix for an additional one (1) minute.

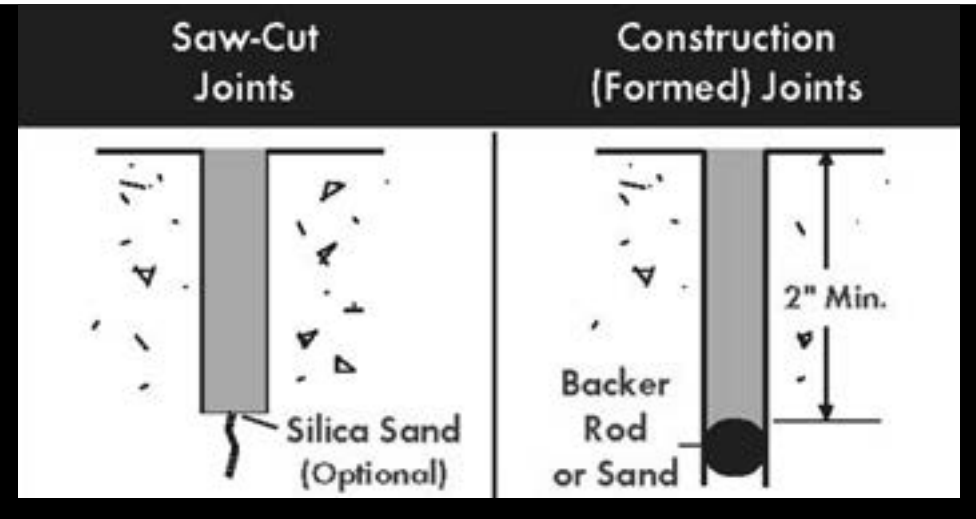


DynaThane 800MM & 800HM Joint Filling

Saw Cut Crack Control Joints: Typically cut utilizing a diamond blade saw capable of creating crack control joints at a depth of 1/3 the full thickness of the concrete slab. The DynaThane 800 may be installed up to 2" deep in saw cut control joints. If joint depths are greater than 2" refer to the statement below.

Through-Slab Construction (Formed) Joints (or any joints exceeding 2" depth): The installer may use silica sand or backer rod if it is held down at least 2" from the top surface. Refer to the illustration below. Contact Pecora Technical Service for information on special conditions.

Typical crack control joints, saw cut or formed, can range from 1/8" up to 3/4" wide. There are no limitations regarding joint widths as the DynaThane 800 product is intended exclusively for static (non-moving) joints. The 2:1 width-to-depth ratio typically associated with expansion joint sealants does **NOT** apply to control joint resins as these products are intended for use as joint fillers.



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General Installation & Shaving Procedure

1. Typically, joints may be filled in a single pass. Fill the joint from the bottom up and slightly overfilling to create a crown. If filling in a single pass, then proceed to Step #4. If two passes are preferred or necessary, proceed to steps #2 and 3.
2. Install the first pass of Pecora DynaThane 800 to within 1/2" of floor surface. Observe for any areas of seepage that will require re-filling with the second pass.
3. Make second pass and overfill joint (crown). Allow Pecora DynaThane 800 to cure into a solid before shaving.
4. Complete the installation by finishing (shaving) the top surface of the sealant by using a tile razor floor scraper or similar tool. This is achieved by shaving off the overfill crown AFTER the Pecora DynaThane 800 has cured into a solid.



Shave Times (by product)

DynaThane 800MM: Shave time is 15 minutes at 75°F. 30 minutes at -15°F.

DynaThane 800HM: Shave time is 3 to 5 hours depending on temperature.



Joint Filling



Joint Overfill (crown)



Joint Shaving

Extreme low or high ambient temperatures will affect the cure and razoring time of the 800HM (hand mix). Ambient temperatures (above 90°F) will generally require less time before shaving while low temperatures (below 40°F) may require an overnight curing period before shaving. If the material has cured too long and shaving is difficult, a torch may be utilized to soften the raised crown of the joint filling material just before applying pressure with the scraper. This is a two-person process that includes the first person applying a torch to the raised crowned surface while being followed closely behind by the second person performing the shaving process.

To provide effective concrete joint edge protection, the Pecora DynaThane 800 finished profile must be flush with the floor surface.

TEMPERATURE AFFECTS

Like most polyurethane and polyurea, DynaThane 800 is affected by temperature. At elevated ambient temperatures, the DynaThane 800HM (hand mix) will have a shorter pot life. To extend the working time at elevated temperatures, place the unopened container in a cool and dry environment prior to application. At low ambient temperatures, the DynaThane 800HM will have a longer pot life.

The DynaThane 800MM is minimally affected by low ambient temperatures and can be applied at temperatures down to -15°F.

JOINT FILLER / CONCRETE SEPARATION:

Since slabs continue to shrink after the filler installation, the DynaThane 800 may separate adhesively or cohesively. This is not a failure of the control joint resin. This separation is designed into the product to prevent concrete spalling in the event of excessive movement due to concrete shrinkage. To repair, saw cut out effected area to 1/2" depth and re-apply the DynaThane 800 flush with surface.

CLEAN-UP

Use isopropyl alcohol to clean all tools. Remove spills on floor by scraping or with isopropyl alcohol. The floor, depending on temperature, can usually be opened to traffic immediately after shaving. If the floor is to be acid-etched or coated, allow the DynaThane 800HM approximately 72 hours of cure and 800MM will require 24 hours of cure (a chemical compatibility test/sample installation is also recommended prior to use). Once cured, mechanical scrubbing and most cleaners will not affect the DynaThane 800. Stains left on joint edges from overfilling are difficult or impossible, to remove. Wire brushing with solvent/light polishing/grinding may be somewhat successful.

STORAGE

One (1) year in dual cartridge packaging and two (2) years in bulk packaging from date of manufacture when stored at 80°F or below.