



Diama-Joint Fill 90 Polyurea Joint Sealant

Item No: DPJF90 – 100 – 01

1. Description

DiamaPro® Diama-Joint Fill 90 is a proprietary polyurea control joint fill material formulated to withstand the abuse of forklift traffic while supporting the shoulders of control joints in concrete slabs. Once installed, it can be shaved within 45 minutes and opened for traffic in less than one hour. Its low viscosity properties allow the material to flow into moderate width cracks protecting them from further impact damage. Its unique formula performs in temperatures ranging from 30°F - 130°F.

DiamaPro® Diama-Joint Fill 90 is 100% solids, 2-component, moisture insensitive with a mixing ratio of 1:1. It has an application temperature range between -20°F – 130°F.

2. Features / Recommended Uses

Features

- Supports the shoulders of joints and cracks to minimize further edge spalling.
- Semi-rigid formulation to withstand vibration and slight joint movement while in service
- Moisture insensitive during and after cure
- Odorless with no toxic vapors
- Meets USGBC's LEED® requirement of IEQ Credit 4.1
- Bond strength <400 psi. Designed to release from the joint face minimizing stress on the concrete shoulder while incurring high levels of joint movement or concrete shrinkage.

- Durable and will not smear when polished.

Recommended Uses

- Food related environments
- Where heavy forklift traffic is exhibited
- To seal interior control joints no matter the intended use of the floor

3. Technical Data

PHYSICAL PROPERTIES

- Appearance: Various colors
- Odor: Negligible
- VOC Content – 0 g/l
- Viscosity (mixed): Self-leveling
- Pot-Life: 35 seconds in a 100-gr. mass @ 74°F
- Tack-free @ 74F: 5-15 minutes
- Mix Ratio: 1:1 by volume
- Shavable: <45 minutes @ 75°F
- Full Traffic: <60 minutes @ 75°F
- Tear Strength: ASTM D-624 148
- Tensile Strength: ASTM D-412 900-1000
- Shore A Hardness: ASTM D-2240: 90-93
- Elongation %: ASTM D-412 180-200
- Tear Strength Die B (ASTM D-624) 148
- Compatible with most concrete substrates
(testing always recommended)

4. Limitations

DiamaPro® Diama-Joint Fill 90 is not designed to seal moving joints/cracks or that exhibit hydrostatic pressure. The concrete substrate



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must be properly cured for 28 days and/or the relative humidity of the substrate needs to be at or below 85%. If the concrete is not fully cured and continues to shrink after joint fill installation, bond release might be exhibited but the joint material will remain functional.

Some solvents have a slight effect on the appearance of the cured material. Oils could discolor the surface. In either case the performance of the material will not be altered. Chemical resistant testing is recommended on a mock-up if there is a concern. For interior use only.

5. Application Procedures and Instructions

Surface Preparation: The concrete substrate must be properly cured for 28 days and/or the relative humidity of the substrate needs to be below 85%. Joint must be dry; sound and all bond inhibiting materials must be removed. If unsure if all contaminants have been removed, use a power saw with the appropriate blade to clean the sides of the joint. Vacuum after sawing.

If desired, a **DiamaPro® Tint** (color) may be added. Induce the tint into the “B” component and shake or mix well depending on unit size.

Bulk Dispensing: **DiamaPro® Diama-Joint Fill** is available in 10-gallon units. With a “bulk” type pump fitted with a static mixing nozzle, set the pump to mix at a 1:1 mix ratio. Power mix both “A” and “B” components well before loading it into the pumps holding vessels. The material has a 30 second fluid life after the two components have been combined before it takes an initial set.

Do not allow the mixed material to set for longer than 30 seconds in any portion of the pump. If longer, the set material will obstruct further flow of material and will need to be disassembled for cleaning. Pump material into a bucket to ensure both components are blending in equal proportions. Bring the nozzle over the joint and continue pumping mixed material until the joint is slightly over filled. This might take two passes.

Cartridge Dispensing: **DiamaPro® Diama-Joint Fill 90** is available in 22 oz. cartridges. Insert the cartridge into the hand dispenser. While pointing the dispenser up, remove the safety cap from the cartridge. Connect the supplied static mixing nozzle to the side by side cartridge with the retainage nut and tighten. While the nozzle is in the upward position, slowly start pumping the material. Just before it reaches the end of the nozzle, place the nozzle in a downward position into a cup. Continue slowly pumping material into the cup until both the components are being dispersed at the same rate. Quickly move the nozzle over the joint and slightly over fill the joint in a steady motion. This might take two passes.

Shaving Excess Material: Once the material has set for 35 minutes, with a shaving blade, shave a small area. If it doesn’t peel from the surface allow the material to cure for an additional 5 minutes. Continue until the material shaves well and easily peels from the surface. The cure rate (time to shave) is temperature dependent and will slightly fluctuate on every project.

Clean Up: Mixed and cured product can be disposed of as normal construction debris. Components “A” and “B” can be fully mixed,



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allowed to cure and then disposed of as normal construction debris. Static mixing nozzles can also be discarded when finished.

exclusive of any labor costs at the discretion of **DiamaPro® Systems**.

Lineal feet of joint per gallon of material

J		1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1.0"
O	1/8"	1232	821	616	411	308	205	154
I	1/4"	616	411	303	205	154	103	77
N	1/2"	308	205	154	103	77	51	39
T	3/4"	205	137	103	68	51	24	26
	1.0"	154	103	77	51	39	26	19
D	1-1/2"	103	68	51	34	26	19	13
E	2.0"	77	51	39	26	19	13	10
P	2-1/2"	62	41	31	21	15	10	7
T	3.0"	51	34	26	17	13	8	6
H	4.0"	39	26	19	13	10	7	5

WIDTH OF JOINT

22 oz. Cartridge = 5.81 cartridges per gallon

6. Availability

DiamaPro® Diama-Joint Fill 90 is only available through **DiamaPro® Systems** Authorized Distributors. Packaged in 22 oz.- cartridges and 10-gallon units. For a list of Authorized Distributors please contact **DiamaPro® Systems**.

7. Conditions of Sale / Limited Warranty

DiamaPro® Systems warrants this product for one year from date of purchase to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase prior replacement of this product

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8. Technical Services

The **DiamaPro® Systems** office aids with specifications, performance test data and field services.

9. Disclaimer

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