



North American
ADHESIVES®

NA 1640

Crack Isolator™

**Liquid-Applied,
Crack-Isolation Membrane**



PRODUCT DESCRIPTION

NA 1640 Crack Isolator is a premixed, liquid-applied, quick-drying membrane applied over concrete substrates to keep cracks from migrating up through ceramic tile and stone installations. *NA 1640 Crack Isolator* can be used for ceramic tile and stone in residential and commercial interior/exterior environments. It meets ANSI A118.12 requirements and provides up to 1/8" (3 mm) of in-plane crack isolation. It is then ready to receive most North American Adhesive (NAA) polymer-modified or epoxy mortars.

USES

- For residential and commercial interior and exterior floors
- For in-plane crack isolation up to 1/8" (3 mm) over nonstructural cracks

SUBSTRATE REQUIREMENTS

- All recommended substrates must be structurally sound, stable, clean and free of any substance preventing adhesion or reducing performance.
- Do not use chemicals (acid etching or stripping) to prepare approved substrates.
- Concrete substrates should have a concrete surface profile (CSP) of #2 per the International Concrete Repair Institute (ICRI).
- Mechanically clean and profile by diamond cup grinding or other engineer-approved method when necessary.
- The substrate and room temperatures must be between 45°F and 95°F (7°C and 35°C) during and at least 24 hours after application.
- Fill all cracks, control joints and gaps in the floor that are greater than 1/32" (1 mm) with an appropriate filler material.
- Force the material into the crack and finish smooth with a trowel.
- Let dry.

Consult Technical Services for installation recommendations regarding substrates and conditions not listed.

SUITABLE SUBSTRATES

- Fully cured concrete at least 28 days old (see "Limitations")
- Cured cement mortar beds or leveling coats
- Cement backer units (CBUs)
- Properly prepared radiant-heated substrates (interior only)
- Properly prepared unglazed ceramic tile, cement terrazzo floors and gypsum underlayments (interior only and greater than 2,500 psi [17.2 MPa]).
Note: Existing unglazed ceramic tile must be abraded, and existing cement terrazzo must be mechanically profiled. Both must be skimcoated with an appropriate NAA latex- or polymer-modified mortar.
- Exterior-grade plywood (for interior residential floors and countertops in dry areas only)

See NAA's "Surface Preparation for Tile and Stone Installations" document in the Document Library section at www.na-adhesives.com.

LIMITATIONS

- Do not use over structural cracks, in-plane cracks greater than 1/8" (3 mm) or where vertical out-of-plane movement occurs.
- Do not use over substrates containing asbestos, dimensionally unstable substrates such as hardwood flooring, particleboard, oriented strand board (OSB), Masonite or metal.
- Do not use over plank flooring, treated plywood, Lauan, vinyl, glazed tile, laminate, fiberglass or epoxy floors.
- Do not use where excessive substrate moisture and/or where negative hydrostatic pressure exists. The maximum allowable moisture is 8 lbs. per 1,000 sq. ft. (3.63 kg per 92.9 m²) per 24 hours per ASTM F1869 or up to 85% relative humidity as measured with moisture probes.
- Do not use with premixed setting materials.
- Do not allow direct contact with solvent-based materials.



NA 1640

Crack Isolator™

- Do not use in extreme freeze/thaw conditions.
- Do not apply when the substrate temperature is at or below the dew point.

MIXING

Before product use, take appropriate safety precautions. Consult the Safety Data Sheet for safe-handling instructions.

- *NA 1640 Crack Isolator* is ready to use; stir by hand before application. Do not dilute with any other material.

APPLICATION

1. Apply *NA 1640 Crack Isolator* at a wet film thickness of 20 mils (0.5 mm) – about the thickness of a credit card. Apply to the entire area using a brush or 3/8" (10 mm) nap roller. Let dry to a dark brown color. The final dry thickness should be at least 15 mils (0.38 mm) – about the thickness of a business card.
2. Inspect and, if any areas are not properly covered, apply a second coat perpendicular to the first coat. Let dry.
3. Promptly wash tools with water after use.

EXPANSION AND CONTROL JOINTS

- Do not cover any substrate expansion or control joints with mortar or tile.
- Provide where specified per the most current TCNA Handbook for ceramic tile installation, Detail EJ171, or TTMAC Tile Installation Manual, Detail 09 30 00 301MJ.
- Protect tilework with metal strips (edge metal) along both edges of structural building expansion joints.

CLEANUP

- Remove excess *NA 1640 Crack Isolator* (while fresh) with a damp sponge, soap and warm water. Any completely dried material may be mechanically removed.

PROTECTION

- Protect from traffic, rain and freezing for 24 hours.
- Protect installed *NA 1640 Crack Isolator* from contamination, excessive heat and extended sun exposure until finished flooring is installed.

INSTALLING TILE OR NATURAL STONE

NA 1640 Crack Isolator is ready to receive mortars for tile or stone when dry to touch (about 30 to 50 minutes after application) or when dark brown in color. Medium-bed mortars (for large tile or stone) and screeds (for leveling floors) may require extended setting times when set over *NA 1640 Crack Isolator*. For tile and stone installations, use an NAA polymer-modified mortar meeting ISO 13007 C2, ANSI A118.4 and ANSI A118.11, or an epoxy mortar meeting ISO 13007 R1 or R2 and ANSI A118.3.

NA 1640

Crack Isolator™

Product Characteristics at 73°F (23°C) and 50% relative humidity	
Elongation (ASTM D412)	> 400%
Tensile strength (ASTM D412)	> 350 psi (2.41 MPa)
Color	Purple when wet (dark brown when dry)
Packaging	Pail: 3.5 U.S. gals. (13.2 L)
Shelf life	2 years when stored in original unopened container at 73°F (23°C)
Flash point (Seta flash)	Nonflammable
Color	Purple when wet (dark brown when dry)
Drying time (before installing ceramic tile or stone)	About 30 to 50 minutes (1 coat)
Final dry thickness	At least 15 mils (0.38 mm)
Freeze/thaw stability	Up to 5 cycles at 0°F (-18°C)
Storage	Store in cool, dry place. Protect from freezing.
VOC content (SCAQMD rule 1113)	< 50 g per L
Typical VOC content per SCAQMD Rule 1113 testing methods	0 g per L

Final Performance Per ANSI A118.12 – Crack-Isolation Membranes for Thin-Set Ceramic Tile	
4.1, Fungus and microorganism resistance	Complies
5.1.3, Shear strength at 7 days	Exceeds
5.1.4, Water immersion shear strength at 7 days	Exceeds
5.1.5, Shear strength at 4 weeks	Exceeds
5.1.6, Shear strength after accelerated aging	Exceeds
5.2.3, Point load resistance after 28 days' cure	Exceeds
Seam strength	Exceeds
Breaking strength	Exceeds
Dimensional stability	Exceeds

Approximate Coverage* at a thickness of 15 mils (0.38 mm)	
Size	Coverage
Per 3.5 U.S. gals. (13.2 L)	250 sq. ft. (23.2 m ²)

* Coverage shown is for estimating only. Actual jobsite coverage may vary according to substrate conditions, concrete profile and porosity, type of equipment used, thickness applied, handling and application procedures.

Industry Standards and Approvals

- ANSI: Meets A118.12 standard (Crack-Isolation Membranes for Thin-Set Ceramic Tile)
- ASTM: C627 (Robinson): Extra heavy service rating



North American
ADHESIVES®

NA 1640

Crack Isolator™



North American
ADHESIVES®

MAPEI® Corporation
1144 East Newport Center Drive
Deerfield Beach, FL 33442

U.S. and Puerto Rico

Customer Service: 1-800-747-2722
Technical Services: 1-800-637-7753

© 2024 MAPEI Corporation
All Rights Reserved.
Printed in the USA.

Edition Date: September 25, 2024

Canada

1-844-410-1212

Refer to the Safety Data Sheet for specific data related to health and safety as well as product handling.
For the most current product data and warranty information, visit www.na-adhesives.com.

For information on sustainability and transparency, as well as product certification programs,
contact Technical Services at 1-800-637-7753.

MKT: 24-2907

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the NAA product installation. For the most up-to-date TDS and warranty information, visit our Website at www.na-adhesives.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED NAA WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**