



# Z-QUICK MEND

Spall, crack repair and fill

## PRODUCT DESCRIPTION

Z-Quick Mend is a two-component, polyurethane hybrid specially designed with an ultra-low viscosity providing a quick repair of hairline cracks and spalls in concrete. With its fast-curing properties, it is perfect for use when minimal downtime is required and rapid return-to-service is needed, and can be used in temperatures from 0 °F to 110 °F (-18 °C to 43 °C).

## USES

- Quick repair for interior/exterior cracks
- Product can be used with sand/aggregate for larger repairs
  - Industrial floor repair applications with high volume traffic
- Nose joint repairs on parking or bridge decks

## ADVANTAGES

- Self-leveling and low viscosity
- Reaches over 4,500 psi (31 MPa) compressive strength in one hour
- Easy 1:1 mix ratio
- Pigments can be added for color matching
- Wide temperature application range between 0 °F to 110 °F (-18 to 43 °C)
- Repaired cracks and spalls can be opened to traffic in less than 60 minutes at 77 °F (25 °C)

## COLOR AND MIX RATIO

Part A (Resin) Amber: Part B (Hardener) Black,  
Mix Ratio: 1:1 by volume, Mixed Color when  
cured - Gray

## SHELF LIFE AND STORAGE

For best results, store between 40 °F (4 °C) and 90 °F (32 °C). Shelf life is 18 months when stored in unopened containers in dry conditions.

## SPECIFICATIONS

The crack or spall repair material shall be a two-component, 1:1 ratio, solvent free polyurethane system. When cured for 7 days and at a temperature of 75 °F (24 °C), the polyurethane material must have a minimum tensile strength of 3,210 psi (21 MPa) and a 1 hour compressive strength (neat) of 4,629 psi (32 MPa) per ASTM D695. Cured adhesives shall have a minimum Shore D hardness of 71 per ASTM D2240.

## PHYSICAL PROPERTIES

PHYSICAL PROPERTY	VALUE	ATSM TEST
Hardness		D 2240
Compressive Strength		D 695 C 579
Tensile Strength		D 638
Elongation		D 638
Bond Strength		C 882
Viscosity		D 2393
VOC Content		D 1259
Surface Tension		
Get Time		C 881
Cure Time		D 1640
Temperature Application Range		C 881
Solids		D 2369



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## INSTALLATION INSTRUCTIONS

### Crack Repair Procedures

1. In horizontal concrete slabs, inject directly into cracks by placing the mixing nozzle tip directly over the crack. Allow the adhesive to penetrate into the crack and top-off as needed. Kiln-dried medium grade silica sand can be broadcast on top of the repair to add texture or to more closely match that of the existing concrete.
2. For larger, deeper cracks, insert backer rod or a layer of kiln-dried sand to eliminate excessive loss of adhesive. The layer of product must still be at least 1/2 in. (13 mm) deep on top.
3. The repair will be tack-free in less than 10 minutes at 75 °F (24 °C). Excess material may be removed shortly after application by scraping/leveling with a blade. The crack surface may be ground smooth one hour after application. See SDS for precautions while grinding.
4. Allow material to be fully cured before subjecting the repaired area to any type of traffic (see Table 3 for working and full cure time schedule).

### Spall Repair Procedures

1. Spall repairs can be done with neat material or using a repair mortar.
2. To form a repair mortar, Z-Quick Mend should be mixed with kiln-dried medium grade (approximately 60 mesh) silica sand to form a repair mortar. Deep patches can use larger aggregate blends.
3. For best results, all equipment and materials prepared prior to mixing. The ratio of sand to mixed adhesive should be between 1 and 3 parts of sand to 1 part of mixed product. For the best results, test several ratios to select the ratio of sand to liquid to yield desired results. Premeasure the sand needed based on the volume of mixed Z-Quick Mend.
4. When using bulk product for spall repair, use the "Bulk With Aggregate" instructions below. Using (2 gallon kit), QUICKLY, but thoroughly, mix only the amount needed for the repair (50% of Part A with 50% of Part B volume) with Jiffy mixing paddle (or similar) and drill motor at low speed for 20 seconds maximum.
5. When using cartridge products for spall repair, dispense the desired amount of liquid from cartridge into mixing container while Parts A & B are mixing, swiftly add the premeasured sand. Make sure all sand is saturated or wetted out and there are no "clumps" on bottom of bucket. Rapidly scrape the bottom and sides of pail to assure good mix. Use clean containers when mixing multiple batches.
6. After mixing Z-Quick Mend at 75 °F (24 °C), it must be placed within 5 minutes. In warmer temperatures, place product in less than 5 minutes.

7. Rapidly pour and trowel (do not over trowel due to fast cure of product). a. Only mix the quantity that can be mixed/placed within 5 minutes (1 gallon at a time maximum). b. Repairs should be from a minimum 1/2 in. (13 mm) up to a maximum 3 in. (76 mm) per lift to avoid cracking from high heat exothermic reaction.

### Control Joint Repair Procedures

1. Unprotected control joints may spall when subjected to traffic.
2. Saw cut spall areas as described in spall repair preparation section.
3. Fill the entire area with Z-Quick Mend.
4. After cure, saw cut control joint and fill with Ziis joint treatment product.

### Bulk Preparation Mixing Instructions WITHOUT Aggregate

1. Mix only the amount of material that will be used before the working time expires. Shake containers A and B for 10 seconds each. Proportion equal parts by volume of both Part A and Part B into separate containers.
2. Pour both parts into a clean pail while assuring they are mixed at an exact 1:1 ratio by volume. Mix thoroughly by hand with a spatula or with low-speed drill (300-400 rpm) and a mix paddle attachment such as a Jiffy Mixer. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take 20 seconds maximum. When the material is well mixed it will be completely free of streaks.

*NOTE: Do not over mix. Apply to repair the area immediately.*

### Bulk Preparation Mixing Instructions WITH Aggregate

1. Mix only the amount of material that will be used before the working time expires. Shake containers A and B for 10 seconds each. Proportion equal parts by volume of both Part A and Part B into separate containers.
2. Measure desired volume of kiln-dried sand based on total liquid to sand ratio. The ratio of sand to liquid should be between 1 to 3 parts of sand to 1 part by volume of total liquid product. For best results test several ratios to select the ratio of sand to liquid to give you the desired result. In a clean mixing container add Part A and sand. While mixing, carefully scrape the sides and the bottom of the containers. Mix thoroughly with a drill and mixing paddle at low rpm for a minimum of 2 minutes or until material is free of streaks and lumps.
3. Quickly add Part B to Part A sand mixture in container. Thoroughly mix material until free of streaks for a maximum of 1 minute and apply to repair area immediately



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## LIMITATIONS

- For professional use only
- Do not thin with solvents, as this will prevent cure
- NOT intended for repairing cracks subject to movement (eliminate the cause of cracking prior to repair)
- NOT intended for aesthetic finishes - when cured it can be coated or painted to meet desired appearance installation instructions
- New concrete should be a minimum of 21 days old prior to crack repair
- Cartridge balancing and crack or spall repair instructions must be followed closely
- Additional care should be taken when injecting into cracks below grade and/or below 32 °F (0 °C)
- This product is highly sensitive to and reactive with moisture and therefore, the cementitious substrate must be completely dry prior to application (see installation instructions for further details)

## CLEAN UP

Always wear appropriate personal protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment using a mild solvent. Cured material may only be removed mechanically using a sander or grinder. Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

## HEALTH & SAFETY

**Safety:** Use OSHA-approved personal protective equipment (PPE), including safety glasses, gloves and confined space equipment/ procedures if applicable. Avoid skin contact; do not ingest. See SDS for complete safety precautions. For professional use only.

## FIRST AID

KEEP OUT OF REACH OF CHILDREN. Do not drink.

**Eye Contact:** Immediately flush with large amounts of water. Seek medical attention. **Inhalation:** Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention. **Ingestion:** Seek medical attention immediately. **Skin Contact:** Wipe off contaminated area and wash with soap and water immediately.

## MANUFACTURING

Products are manufactured by ZIIS (Utah Foam Products Inc.) in the U.S.A. under strict quality assurance practices at our Salt Lake City, UT plant.

## WARRANTY & DISCLAIMER

**ZIIS, (UTAH FOAM PRODUCTS INC.) WARRANTS ITS PRODUCTS TO BE FREE FROM MANUFACTURING DEFECTS AND THAT PRODUCTS MEET THE PUBLISHED CHARACTERISTICS WHEN TESTED IN ACCORDANCE WITH ASTM AND ZIIS STANDARDS. NO OTHER WARRANTIES BY ZIIS (UTAH FOAM PRODUCTS INC.) ARE EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ZIIS WILL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES RESULTING FROM ANY CLAIMED BREACH OF WARRANTY. ZIIS' LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPLACEMENT OF MATERIAL OR REFUND OF SALES PRICE OF THE MATERIAL. THERE ARE NO WARRANTIES ON ANY PRODUCT THAT HAS EXCEEDED THE "SHELF LIFE" OR "EXPIRATION DATE" PRINTED ON THE PACKAGE LABEL. THERE ARE NO WARRANTIES IF THE SUBSTRATES WERE NOT PROPERLY PREPARED; IF THE PRODUCTS WERE NOT PROPERLY MIXED; OR THE PRODUCTS NOT PROPERLY APPLIED.**