

## U-MIX® FLOOR WELD

### TWO PART INJECTION POLYUREA FOR HORIZONTAL CRACK REPAIR

**PRODUCT DESCRIPTION:** Specco U-Mix® Floor Weld is a rapid setting, two component, 100% solids, low viscosity self leveling polyurea resin for permanently bonding non-moving horizontal concrete surface cracks and voids. U-Mix® Floor Weld exhibits very rapid set and strength gain properties. This makes it ideal for quickly rebuilding damaged floor spalls in high traffic areas such as warehouses and parking structures, or to repair cracked concrete flatwork surfaces prior to installing decorative topcoat treatments such as driveways, patios, or pool decks or other areas that have minimal downtime allowances. U-Mix® Floor Weld achieves strength so quickly it can allow the overlayment application in as little as 15-20 minutes, whereas optional epoxy repairs require typically 2-4 hours of cure time before covering. U-Mix® Floor Weld is also superior to most epoxy repair methods by exhibiting greater year round application versatility since it can be used in temperatures as low as 0°F. This makes it ideal for repairs in freezers, cold storage, or other industrial facilities.

**BENEFITS:** RAPID SETTING...VERY FAST STRENGTH GAIN DUE TO SHORT CURE TIME...CAN ACCEPT VEHICAL TRAFFIC IN 15-20 MINUTES...CAN BE USED FOR SUB FREEZING APPLICATIONS DOWN TO 0°F...SELF LEVELING...CHOICE OF 10 OZ.UNIVERSAL (SPLIT CARTRIDGE) FOR SIMPLE CAULK GUN APPLICATION OR 20 OZ.DUAL CARTRIDGE UNITS FOR SMALL AREA CRACK REPAIRS AND EASY PLACEMENT INTO CRACK...HIGH CHEMICAL AND IMPACT RESISTANCE

#### COMPOSITION:

Part A:	Polymeric diisocyanate based resin / VOC = 2.5 lb./ gallon
Part B:	Amine-diphenylmethane based cure / VOC = 4.43 lb./ gallon

PHYSICAL PROPERTIES at 70° F (21 °C):	APPROXIMATE VALUES:
Weight per Gallon (mixed) / percent solids:	8.33 +/- 0.1 lb./ gallon / 60% solids
Viscosity-Brookfield:	30 cps +/- 5 cps
Flash Point:	> 245° F -open cup method
Mix ratio:	1:1 by volume (A to B)
End Color:	Light amber-yellow, also available in optional light gray tint
Hardness: (ASTM D 2240)	Shore 70D Durometer
Elongation: (ASTM D124)	7-8%
Compressive Strength: mixed with Mason's sand at 1:1 ratio	Approx 4000 psi at 2 hours, 4800 psi at 7 days
Tensile Strength: (ASTM D 412)	4000 psi
Tear Strength: (ASTM 624C)	450 psi
Gel Time / Tack free time:	2-3 minutes / 5-6 minutes
Coverage per 20 ounce dual cartridge:	50 lineal ft. per 1/4" wide x 4" deep crack-using sand as filler

**SURFACE PREPARATION:** Concrete must have a 28 day minimum cure prior to application. Remove all loose and deteriorated concrete, mortar and old repair materials from the area to be repaired. All cracks should be chased or routed to 1/2"- 3/4" depth by use of a right angle hand grinder with a crack chasing diamond blade for concrete grinding. If the cracked slab is exhibiting a high degree of settlement or movement, additional carbon fiber "dog ties" can be applied to increase the ultimate tensile strength of the repair. The tie fiber placement channels can be pre-cut at this time with the same grinder, placing them perpendicular to the crack, and spacing them approximately one foot apart. Blow debris and residue out of all the cracks by hand blower or compressed air source, or clean out the crack by use of shop vacuum. U-Mix® Floor Weld is moisture sensitive and should not be applied to wet surfaces. Use a blow dryer or fans to dry the area prior to application if it is damp.

**DIRECTIONS FOR USE:** The application of U-Mix® Floor Weld Polyurea requires either a standard caulk gun or a dual component low pressure injection gun set up for 1:1 dispensing ratio. Remove the end caps off the cartridge ends to allow material to exit. Holding the injection gun upward, place the cartridge set into the gun. After removing the cartridge end cap per cartridge directions, apply the flow restrictor check valve insert into the cartridge top, then attach the static mixing nozzle by use of the supplied retain nut. A very fine 3/16" x 48 element static mixer nozzle is recommended for correct mixing and dispensing of this product due to its very low viscosity. While still pointing the nozzle upward, squeeze the trigger of the gun until air and unmixed product are expelled from the static mixer, maintaining constant flow through the mixer, then lower the gun and begin the crack injection application. Fill the crack with enough material to serve as a "primer base", and not enough to fill the crack completely. The material will wet out and saturate into the crack sides. Next, add some masons sand as a base by sprinkling into the crack. Take care not to over fill the crack with too much sand, and letting the sand saturate into the resin. It is important that the sand is added before the U-Mix® Floor Weld cures, which is typically in 10-15 minutes. Note- For larger openings and voids, 3/8" pea gravel can be used for "base" filler in place of the sand. Apply any "dog tie" reinforcement carbon fibers into the pre-cut cross channels at this time. Reapply a final layer of U-Mix® Floor Weld as a topcoat, letting it puddle into the crack and base sand layer. Add a second layer of sand as a top fill layer, leaving a slight hump, and let saturate again. Lightly scrape excess material at this time with a trowel and smooth the surface flush. After approximately 20 minutes has elapsed, the U-Mix® Floor Weld will turn lighter in end color, indicating it has reached initial cure. Use a mechanical grinder or sander and flatten to a smooth finish. The area is now permanently bonded and ready for additional treatments.

**CAUTIONS:** Note that this is a very fast product and it is advisable to read all technical information and pre-test it before using on large applications. Make sure all application areas are dry, as the repair area must be moisture free to allow proper penetration, reaction and bond. Do not point the injection gun upward after the injection process has begun, which can cause cross over contamination and back flow of mixed product into the individual cartridges due to the low viscosity of the resin. Since U-Mix® Floor Weld sets up very quickly, do not allow mixed material to remain idle in the static mixer for more than 1-2 minutes, as this delay may result in a plugged mixer tip. Do not inject U-Mix® Floor Weld into frozen, frost filled or icy cracks. U-Mix® Floor Weld is not intended for expansion joint repairs or where a flexible sealant is required. U-Mix® Floor Weld is recommended for "non-moving" substrate crack repair only, and is not recommended for use as a binder in any expansion or control joints. **WARNINGS:** Avoid contact with skin and eyes. Wear protective clothing and safety glasses during application. Keep away from heat, sparks and open flame. Use with adequate ventilation. Keep away from food and drink. Do not take internally. Refer to product M.S.D.S. (Material Safety Data Sheet) for further health and safety information. **FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN.**

**H.M.I.S. CODES:** Component A: HEALTH = 2, FLAMMABILITY = 2, REACTIVITY = 1, P.PROTECTION = E Component B: HEALTH = 1, FLAMMABILITY = 2, REACTIVITY = 0, P.PROTECT = E

**SHIPPING NAMES:**

Component A: Diphenylmethane Diisocyanate / CAS# 101-68-8

Component B: Polyoxalkyleneamine blend / CAS# 904-610-0

**SHIPPING CLASS:** ITEM 43940, SUB 2, LTL 55-Non-Flammable Liquid-Not Regulated by DOT

**PACKAGING:** 10 oz. single universal cartridges (12 units / case) or 22 oz. dual cartridges (6 units / case) **STORAGE:** 60° to 80° F preferred. Store cartridges away from moisture or damp areas. **SHELF LIFE:** 1 year properly stored

**LIMITED WARRANTY:** This product is warranted to be of merchantable quality when used according to the instruction herein. It is not warranted to be suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is limited to the replacement of the product as purchased, if found to be defective upon inspection by the manufacturer. This limited warranty is issued and accepted in lieu of all other expressed warranties and explicitly excludes liability for consequential damages. Buyer assumes all risk and liability resulting from the use of this product. Revised -09-04-09