



Z-SEAL LM

Low-viscosity, low surface tension,
100% solids epoxy

DESCRIPTION

Z-SEAL LM is a low viscosity, low modulus, 100% solids epoxy healer sealer that provides superior penetration for concrete pavements.

ADVANTAGES

- Excellent bond strength
- Moisture insensitive
- High early strength
- Easy to mix - 2:1 ratio
- 100% solids
- Low viscosity
- Zero V.O.C. content
- Low odor
- Low modulus
- Designed for automated pump or hand mix application

USES & APPLICATIONS

Z-SEAL LM is a suitable treatment for prolonging the life of concrete pavements by penetrating and sealing surface cracks and blocking moisture and deicing chemicals from reacting with the concrete and reinforcing components of the structure.

- Bridge decks
- Parking decks
- Concrete floors
- Roadways
- Airport runways/taxiways
- Columns & beams in splash zones
- Consolidation of porous & dusting surfaces
- Primer or pre-treatment for subsequent epoxy or urethane deck coatings

PACKAGING

- 15 Gallon Kit (A – (2) 5 Gallon Pails, B – (1) 5 Gallon Pail)
- 165 Gallon kit (A – (2) 55 Gallon Drums, B – (1) 55 Gallon Drum)
- 750 Gallon Kit (A – (2) 250 Gallon Totes, B – (1) 250 Gallon Tote)

COVERAGE

The prescribed application rates are for general estimating purposes. Actual rates depend on substrate condition, applicator performance, temperature and apparent cracks at surface of area to be treated.

	EPOXY	AGGREGATE
Tined	1 gallon/60-80 sq. ft.	4-8 lbs./sq. yd.
Smooth	1 gallon/100-150 sq. ft.	4-8 lbs./sq. yd.

CURE TIMES

The table contained herein provides general cure times. Actual jobsite conditions, substrate temperature, ambient temperature, sunlight exposure and material pre-conditioning effect the ultimate cure time.

	AVERAGE TEMPERATURE OF MATERIALS & SUBSTRATE (°F)					
Cure Temp	60-64	65-69	70-74	75-79	80-84	85+
Cure Time	5.5 hrs	4.5 hrs	3.5 hrs	3 hrs	2.5 hrs	2 hrs



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PRODUCT INFORMATION

COLOR: A – Clear, B – Amber

SHELF LIFE: 2 years in original, unopened containers.

STORAGE CONDITIONS: Store dry at 40–95 °F (4–35 °C).

Condition material to 65–85 °F (18–29 °C) before using.

TEMPERATURE CONSIDERATIONS: IMPORTANT! Epoxy Resins are temperature sensitive and care should be taken to condition all components to between 65°F to 85°F for a minimum of 24 hrs. prior to mixing and placement. Temperatures colder than stated range increase viscosity of resins and inhibit mixing and flow of materials. Temperatures warmer than stated range decrease viscosity of resins, hasten the cure and reduce the working time. Mixing and curing at less than ideal temperatures, <50°F or >100°F, will require special considerations.

PHYSICAL PROPERTIES

LABORATORY TESTS	RESULTS
C-881 Viscosity	90-140 cps
C-881 Gel Time	16-22 Minutes
C-882 Bond Strength (2 day cure)	>1,500 psi
D-2240 Shore D Hardness	65-75
D-570 Absorption	<1.0%
D2566 Linear Coefficient of Shrinkage	0.0025
D-695 Compressive Modulus	<100,000 psi
D-638 Tensile Strength	2,800-3,200 psi
C-579 Compressive Strength (Tested with Aggregate)	4,000-6,000 psi
D638 % Elongation at Break	30%-45%
VOC Content	0 g/L
Total Solids, % by Weight	100%
ACI 503 Adhesion to Concrete	>500 psi (Concrete Failure)
D1652 Epoxide Equivalent Weight	<190
AASHTO T-277 Chloride Ion Permeability	<50 coulombs



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DIRECTIONS FOR USE:

Surface Preparation: Clean surface by shot-blasting or sandblasting to remove all contaminants and open surface and cracks. Remove dust and debris by blowing off with oil-free compressed air.

Mixing: Mechanically mix Component A with Component B 2:1 by volume with Jiffy type mixer and low-speed variable drill at 300 rpm for a minimum of 3 minutes. Mix only the quantity that can be used within its gel time. **BULK:** For bulk mixing, a positive displacement pump, incorporating a static mixing wand and meter, is recommended.

Placement: Apply neat Z-SEAL LM by pouring or spraying on the surface. Distribute material evenly with a squeegee, roller or broom, maintaining a liquid head over cracks until refusal. Remove all excess material with squeegee or broom. Broadcast select aggregate to properly cover liquid resin. The aggregate should be moisture free and free of dirt, clay, etc. After initial cure of first course, remove excess aggregate. When used as primer or pre-treatment prior to overlay, consult ZIIS representative.

Clean Up: EQUIPMENT: Uncured material can be removed with approved solvent. Cured material can only be removed mechanically. MATERIAL: Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

LIMITATIONS

- For professional use only
- Do not thin or reduce
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- Do not thin with solvents
- Compressed air equipment must have an oil/air separator.
- Minimum age of concrete must be 28 days before applying as an overlay.
- Maximum of one flood coat application.
- Z-SEAL LM is a vapor barrier after curing.
- Substrate temperatures must be 50°F and rising prior to installation; 50°F must be maintained minimum of 8 hours post installation or meet curing guidelines stated above for proper cure.
- Consult ZIIS representative when mixing or placing outside of the temperature recommendations listed.



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CAUTIONS

READ SDS PRIOR TO USING PRODUCT

- Component A: Irritant
- Component B: Corrosive
- Product is a strong sensitizer. Use of safety goggles and chemical resistant gloves are recommended.
- Use in a well-ventilated area and avoid breathing vapors
- Use of a NIOSH/MSHA organic vapor respirator is recommended if ventilation is inadequate.
- Avoid overspray or mist conditions when applied by sprayer
- Avoid skin contact

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.

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

EYE CONTACT: Flush immediately with water for at least 15 minutes. Contact physician immediately.

RESPIRATORY CONTACT: Remove person to fresh air.

SKIN CONTACT: Remove any contaminated clothing. Remove epoxy immediately with a dry cloth or paper towel. Solvents should not be used as they carry the irritant into the skin. Wash skin thoroughly with soap and water.

IF INGESTED: Do not induce vomiting. If swallowed give water to drink. Seek medical treatment immediately.

GENERAL: Remove contaminated soaked clothing immediately. In the event of persistent symptoms receive medical treatment.

CURED EPOXY RESINS ARE INNOCUOUS.

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 no warranty of merchantability or fitness for a particular purpose. ZIIS will not be liable for damages of any sort 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.