

# Macrylex Crack Sealer

Methyl methacrylate resin sealer

duraamen

engineered to perform

## DESCRIPTION

Macrylex Crack Sealer is a 100% reactive ultra-low viscosity methyl methacrylate resin used as a penetrating sealer or to fortify extremely porous concrete substrates. Macrylex Crack Sealer is typically used on bridge decks, parking structures or as a general penetrating sealer to prevent moisture intrusion. It hardens rapidly with the addition of Macrylex Hardener, even at low temperatures.

## ADVANTAGES

- Fast Cure for rapid recoat and return to service (within 60 minutes)
- Ultra-low Viscosity for excellent absorption into concrete
- Protects against water penetration
- VOC Compliant (100% solids)
- Full Strength in one hour
- Use over wide temperature range – even below freezing

## SUBSTRATE REQUIREMENTS

- Substrate must be dry and free of dirt, waxes, curing agents and other foreign materials.
- It should not be installed on fresh concrete until maximum shrinkage has occurred (at least 30 days after placement).
- On or below grade installation must have an efficient vapor barrier under the slab (minimum 10-15mil)
- Moisture vapor transmission must be less than 3kb per ASTM-F-1869 and less than 80% RH per ASTM F-2170
- Priming with Macrylex Primer before applying the Crack Sealer

## COMPOSITION

Macrylex Crack Sealer is a 100% reactive methyl methacrylate resin.

## COLOR SELECTION

Macrylex Crack Sealer is supplied in clear

## SURFACE PREPARATION

Surface Preparation is the most critical portion of any successful high performance flooring system. All substrates must be properly prepared as Outlines in Duraamen's Technical Bulletin #1. In addition, all Macrylex Flooring Systems require a minimum surface profile of 4 or 5 (CSP 4 to 5) as outlined in ICRI Guideline 310.2-1997 formerly G-03732 (available from www.ICRI.org).

Work must be performed by trained or experienced contractors or maintenance personnel. Shot blast the substrate to remove laitance and expose surface cracks. Clean out cracks with oil-free compressed air.

## MIXING & APPLICATION

Macrylex Crack Sealer requires the addition of Macrylex Hardener to start the hardening process. The amount of hardener must be adjusted to the respective surface temperature (see table below). At temperatures below 40°F, Macrylex CTA (Cold temperature accelerator) must be used in addition to the amount of hardener used at the 40°F or 30°F level.

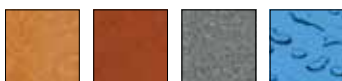
Macrylex Crack Sealer Resin Mix ratios, Pot life and Hardening Temperature			
Temp (F) of resin, air & surface	Hardener by volume (oz) per gallon of resin	Pot Life (min)	Hardening Time (min)
+30°F	9-10 oz	10-12	30
+40°F	7-9 oz	10-12	30
+50°F	5-7 oz	8-10	25
+60°F	4-5 oz	8-10	25
+70°F	4 oz	8-10	20
+80°F	4 oz	6-8	20

**Macrylex MAA:** The addition of this moisture adhesive additive is recommended for damp substrates. Add 5% by volume (or 6.5oz by volume per gallon) to Macrylex Crack Sealer during mixing.

**Macrylex CTA:** At temperatures below 40°F, Macrylex CTA, Cold Temperature Accelerator must be used in addition to the amount of hardener used at the 40°F or 30°F level. As a rule of thumb, add 1/2oz by volume per gallon of resin at 39°F to 32°F, up to 2.0oz by volume per gallon at 20°F; increasing the quantity gradually in a consistent linear progression as the temperature decreases.

**IMPORTANT NOTE:** Macrylex CTA MUST be added to the Resin and thoroughly blended BEFORE adding Macrylex Hardener, or hazardous decomposition may occur (violent foaming). Macrylex CTA will cause yellowing of the resin. Therefore, it is advised to use pigmented Macrylex resins to reduce the appearance of yellowing, but this will have no effect with a penetrating sealer as long as resin-rich surface film is not created.

Inspect underside of elevated decks for evidence of full depth cracks that may require additional treatment to prevent draining of resin. Cracks greater than 1/8" width should be repaired individually prior to application of floor coat. Fill 1/8" or larger cracks with loose sand and pour small quantity of mixed Macrylex



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Crack Sealer into the crack and spread evenly on the surface as a flood coat with a squeegee or rollers and allowed to absorb completely into the concrete substrate. Do not allow to form puddles. Coverage rate will vary depending on the porosity of the concrete and quantity of cracks. For estimating purposes evaluate the substrate with a test patch whenever possible, or use 80-100ft<sup>2</sup>/gallon /coat as a general guide, assume two coats on very absorbent surfaces. Apply subsequent applications of resin only after the previous application is completely hardened. There should be very little resin film on the surface upon completion. Surface resin will appear over time, however the cracks filled and porosity will remain sealed.

## PHYSICAL PROPERTIES

Percent Reactive	100%, zero VOC
Working Life, 50°F-70°F	8-10 minutes will vary with temp & amount of hardener
Recoat Time	45-60 minutes
Viscosity	10 cps
Weight per gallon	8.3lb
Tensile Strength, ASTM D-638	7800-8000psi
Compressive Strength, ASTM D-638	12,500-12,700 psi
Flexural Strength, ASTM D-638	11,100-11,500psi
Water Absorption, ASTM D-570	0.75-0.8% in 24hr
Hardness, ASTM D-2240	>80 Shore D
Elongation, ASTM D-638	4.5-5.0%

## CLEAN UP

Clean tools and equipment with lacquer thinner or MEK. Consult MSDS for safety and health precautions.

## COVERAGE

It depends on the porosity of substrate and quantity of cracks. 80-100ft<sup>2</sup> per gallon per coat is a suggested starting point. Two coats may be necessary on very porous substrates.

## AVAILABILITY

Duraamen Products are available throughout United States and also Worldwide. Please contact us [info@duraamen.com](mailto:info@duraamen.com) or visit [www.duraamen.com](http://www.duraamen.com) for latest information

## STORAGE

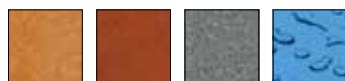
Store in a cold and dry place, below 80°F, out of direct sunlight. Do not store near open flame or food. Shelf life is 6 months in the original unopened containers. After extended storage additives and fillers may separate. It should be inspected for any visible signs of settlement, polymerization, or paraffin coagulation (clumps, strands). Thoroughly mix pails or drums (use a drum mixer, do not rely on rolling the drum on the floor) and pour into new containers to inspect resin before use.

## HELPFUL HINTS

Adequate cross ventilation should be provided. Good ventilation during the processing ensures a good cross linking and hardening. Read, understand and follow SDS instructions prior to use. Use only as directed. If the substrate and/or material temperatures above 90°F, DO NOT APPLY the material.

## WARRANTY

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