



ECO WELD

RAPID SET POLYUREA JOINT AND CRACK SEALANT

Build Greener • Build Better

PRODUCT DESCRIPTION

ECO Weld is a rapid setting, two-component, 100% solids polyurea, designed to repair cracks and spalls and protect joints in concrete floors from the constant impact of heavy, hard-wheeled industrial traffic. **ECO Weld** is hard enough to support and protect joint edges, yet flexible enough to accommodate some slab movement. Repair areas can be re-opened to vehicle traffic in as little as 30 minutes after installation of **ECO Weld**. **ECO Weld** can be used in both high and low temperature areas ranging from -30 to +250° F. It contains no VOC's and meets USDA, FDA and CFIA requirements for use in regulated food processing facilities. **ECO Weld** is ideally suited to a wide range of applications where long-term durability is required.

KEY ADVANTAGES

- + Rapid Cure – Open to Vehicle Traffic in 30 Minutes
- + Durable and Tough – Provides Superior Joint Edge Protection and Support
- + Designed Flexible Enough to Accommodate Movement
- + Excellent Chemical Resistance
- + Easy to Install - Dual Component Pump, Cartridges and Convenient Hand-Mix Kits
- + Available in Fast (5 Min Gel) and Slow (12 Min Gel) Versions for Extra Working Time
- + Horizontal (Self-Leveling) and Vertical Grade
- + Wide Temperature Application Range: -30 to +250° F
- + No VOC's (volatile organic compounds)
- + Low Odor – indoor applications with minimal disturbance
- + Meets USDA/FDA/CFIA Requirements for use in Regulated Food Facilities
- + Not Regulated per USDOT Shipping Regulations – Class 55
- + Low Maintenance
- + LEED Compliant

PRIMARY APPLICATIONS

- + Joint Filling in Concrete Floors
- + Crack Repairs in Concrete Floors
- + Spall and Patch Repairs
- + Freezer and Cold Storage Floors
- + Road and Bridge Deck Repairs
- + Airport Runway Repairs
- + Sidewalk and Driveway Repairs
- + Concrete Deck Repairs

AVAILABLE COLORS

- + Medium Grey, Black
- + Custom Colors Available on Request
- + UV Stable (Colorfast) Version available

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PHYSICAL PROPERTIES

PROPERTY	ECO WELD (5 MIN GEL)	ECO WELD (12 MIN GEL)
Gel Time @ 75° F	5 Minutes	12 Minutes
Open to Vehicle Traffic@ 75° F	30 Minutes	3 Hours
Solids Content	100%	100%
Mix Ratio (by volume)	1A:1B	1A:2B
Viscosity Resin@ 75° F	1200 cps	1200 cps
Viscosity Hardener @ 75° F	1800 cps	1800 cps
Hardness, Shore A (ASTM D2240)	85 A	85 A
Tensile Strength (ASTM D412)	1500 PSI	1500 PSI
Bond Strength (ASTM D4541 Elcometer)	>400 PSI	>400 PSI
Elongation (ASTM D412)	400%	400%
Tear Strength (ASTM 2240)	450 PLI	450 PLI
Flexibility, 1/8" Mandrel (ASTM D1737)	Pass	Pass
Taber Abrasion CS17 wheel (ASTM D4060)	350 mg loss	350 mg loss
Flashpoint (Pensky-Martin closed cup)	>200° F	>200° F

CHEMICAL RESISTANCE

CHEMICAL	RATING (25°C)	CHEMICAL	RATING (25°C)
Acetic Acid (100%)	R	NaCl / H2O (10%)	R
Brake Fluid (DOT3)	RC	Potassium Hydroxide (10%)	R
Diesel Fuel	R	Sodium Hydroxide (10%)	R
Gasoline	R	Sodium Bicarbonate	R
Hydrochloric Acid (10%)	R	Sugar / H2O (10%)	R
Hydraulic Fluid (Oil)	R, Dis	Sulfuric Acid (10%)	R, Dis
Mineral Spirits	R	Vinegar / H2O (5%)	R
Motor Oil	R, Dis	Water	R
Muriatic Acid (10%)	R	Xylene	C

R = Recommended: little or no visible damage
 RC = Recommended Conditional: some effect – swelling or discoloration
 C = Conditional, wash down within 1 hour of spillage to avoid effects
 Dis = Discoloration

PACKAGING

KIT CODE	GEL TIME (MINUTES)	MIX RATIO (By Volume)	KIT SIZE	KIT CONTENTS	
				SIDE A	SIDE B
EW11-5-10P	5	1A:1B	10 Gallons	1 X 5 gal pail	1 X 5 gal pail
EW11-5-600C	5	1A:1B	7.2 L (1.9 Gal)	12 X 300 ML cartridges	12 X 300 ML cartridges
EW11-5-1500C	5	1A:1B	9.0 L (2.4 Gal)	6 X 750 ML cartridges	6 X 750 ML cartridges
EW12-12-15P	12	1A:2B	15 Gallons	1 X 5 gal pail	2 X 5 gal pail
EW12-12-H	12	1A:2B	1.5 Gallons	1 X 0.5 gal bottle	1 X 1 gal (in 2 gal pail)
EW12-12-900C	12	1A:2B	10.8 L (2.9 Gal)	12 X 300 ML cartridges	12 x 600 ML cartridges

Plastic pails are fitted with re-sealable gasket lids. Plastic bottles are fitted with re-sealable caps. Cartridge kits include static mix nozzles.
 Kit EW12-12-H: Side B consists of one gallon of ECO Weld B packaged in a 2 gallon pail with sufficient space for adding 0.5 gallon Side A and for mixing the 2 components in the factory-supplied 2 gallon pail.

COVERAGE RATES

The coverage rate for **ECO Weld** is 230 cu in per gallon.

COVERAGE RATES (LINEAR FEET JOINT PER GALLON)													
JOINT DEPTH (IN)	JOINT WIDTH (IN)												
	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2	3
1/2	307	204	154	122	102	76	62	51	38	30	26	19	15
3/4	205	136	103	82	68	51	42	34	25	20	17	15	15
1	153	102	77	61	51	38	31	26	19	15	13	9.6	9.6
1 1/4	123	82	61	49	41	32	25	20	15	12	10	7.7	7.7
1 1/2	102	68	51	41	34	26	21	17	13	10	8.5	6.4	6.4
1 3/4	88	58	44	35	29	22	18	15	11	8.8	7.3	5.5	5.5
2	77	51	38	31	26	19	15	13	9.6	7.7	6.4	4.8	4.8
2 1/2	61	41	31	25	21	15	12	10	7.6	6.1	5.0	3.9	3.9
3	51	34	26	21	17	13	10	8.5	6.5	5.0	4.2	3.2	3.2



MIXING GUIDELINES

Pre-Condition Product: Pre-condition **ECO Weld** at 65-85° F for a minimum 24 hours before using, and maintain material at this temperature during application.

ECO Weld may be applied with a dual component pump, dual cartridges or convenient hand-mix kits

Pump Applications

Pre-mix the resin side (Side B) in factory containers before using to place pigmentation evenly into solution (not required for natural color material). Pre-mix with a Jiffy mixer and a low speed drill (300-500 rpm) for a minimum of 3 minutes until a homogeneous mix with no streaks is achieved. Fill the Side A and B tanks of the pump with A and B components, being careful not to contaminate the tanks with the wrong material. A static mix nozzle with 30 elements or more is recommended. It is important to maintain constant pressures while installing **ECO Weld** with a plural component pump. A variation in pressures can result in loss of properties, poor color retention and bubbling. Follow pump manufacturer's instructions for operation of pump and dispensing material.

Hand-Mix Applications

Pre-mix the resin side (Side B) in factory containers before using to place pigmentation evenly into solution (not required for natural color material). Pre-mix with a Jiffy mixer and a low speed drill (300-500 rpm) for a minimum of 3 minutes until a homogeneous mix with no streaks is achieved.

Accurately measure the correct proportions of Side A and Side B components, using separate, clean, dry, graduated plastic containers. Mix proportions are:

- + Kit EW11-5-10P (5 minute gel time): 1A:1B
- + Kit EW12-12-15) (12 minute gel time): 1A:2B
- + Kit EW12-12-H (12 minute gel time): 1A:2B
(Kit designed with sufficient space in Side B container for full contents of Side A to be added and the two components mixed directly in the factory supplied B container).

Combine the correct proportions of A and B components and mix together with a Jiffy mixer and a low speed drill (300-500 rpm) for one minute until a homogeneous mix is achieved. If mix batch size is less than 1 gallon (A and B combined), material may be mixed with a stir stick. Keep mixer submerged and do not create a vortex action to avoid drawing air into the mix. Keep mix batch sizes to 2 gallons or less to allow application of mixed product within the pot life. Mixed material may be transferred into plastic pitchers with pour spouts or loaded into bulk caulking guns for dispensing.

Dual Cartridges

Pre-mix the resin side (Side) by shaking the cartridge vigorously for one minute to place pigmentation evenly into solution (not required for natural color material). Insert the dual cartridge set in the appropriate size of dual cartridge gun. Remove the cap from the cartridges and install the static mix nozzle supplied in the kit. Mixing of the two components occurs automatically as the material flows through the nozzle.

APPLICATION GUIDELINES

Preparation

New Concrete: Installation of **ECO Weld** should be deferred as long as possible after concrete placement to allow sufficient concrete curing time for the majority of shrinkage/joint opening to occur (ACI recommends 60-90 days).

Old Concrete: Remove all existing joint/crack sealer, patch repair materials and backer rod, prior to installation of **ECO Weld**.

Cleaning of Joints/Cracks/Repair Areas: After saw-cutting and prior to application of **ECO Weld**, joints, cracks and other repair areas must be thoroughly cleaned so that they are free of all loose concrete, dirt, dust, oil, grease, laitance, rust, scale, paint, coatings, sealers, acids, chemicals and any other contaminants. Acceptable methods of cleaning include using a concrete saw with diamond blade, or sandblasting (simply raking debris out of cracks or joints is not an acceptable method). Eliminate any moisture, prior to application of **ECO Weld**.



Joins and Random Cracks

Saw-cut joints and crack edges vertically to 90° angles to a minimum depth of 1 inch and in accordance with ACI recommendations. Joint and crack edges must be made vertical – avoid V-cutting or feather edges. Avoid “burnishing” the sides of the joint/crack with a grinder. After saw-cutting and prior to application of **ECO Weld**, thoroughly clean joints/cracks and eliminate any moisture, as noted above. Fill control joints and cracks full depth; fill construction and expansion joints 1/4 of the slab depth. Backer rod may be used to seal off the bottom of the joint/crack. **ECO Weld** is designed to gel quickly, but to seal off “sinkers”, it may be necessary to make several passes over the joint/crack and allow the material to cure between passes. Fill joints/cracks flush to slab surface, or leave a slight overpour to be shaved level with slab surface as soon as **ECO Weld** has set sufficiently to make a clean cut.

Spall and Patch Repairs

Saw-cut each side of the spall or patch vertically to 90° angles to a minimum depth of 1 inch and in accordance with ACI recommendations. Spall/patch edges must be made vertical – avoid V-cutting or feather edges. Avoid “burnishing” the sides of the spall/patch with a grinder. After saw-cutting and prior to application of **ECO Weld**, thoroughly clean spall/patch area and eliminate any moisture, as noted above. Install **ECO Weld** into the spall/patch area.

To produce a non-slip finish, **ECO Weld** may be broadcast on the surface with clean dry sand immediately after application. Aggregate filler material (such as clean, dry washed rock) may be used for deep spalls/patches. Coat the bottom and saw-cut edges of the spall/patch with **ECO Weld**, then fill the repair area with aggregate up to 1/2 inch below the finished surface and fill the remaining void to surface level with **ECO Weld**. If the spall/patch is on a slope, **ECO Weld** may be trowelled to match the slope using a trowel coated with toluene or xylene. Seed the trowelled surface with clean, dry sand to build up the viscosity until the **ECO Weld** sets sufficiently to hold to the slope. After installation, shave off any overpours as soon as **ECO Weld** has set sufficiently to make a clean cut.

Cold Temperature Applications

Allow concrete slabs to stabilize at final operating temperature for a minimum of 7-14 days or longer to permit sufficient joint/crack opening, prior to application of **ECO Weld**. **ECO Weld** should be maintained at 60-80° F prior to and during application for best results.

REPAIRS AND MAINTENANCE

If joints/cracks should open after installation of **ECO Weld**, clean voids with a nylon wheel brush and fill with additional **ECO Weld**. Repairs to divots due to unforeseeable abuse may be repaired by removing the damaged area down to sound **ECO Weld** or sound concrete, vertical cut any edges, clean the damaged area of all loose material, dirt and dust, wipe the area with solvent such as toluene or xylene and then place new sound **ECO Weld** in the damaged area.

CLEAN-UP AND DISPOSAL

Clean skin with soap and water; clean tools with solvent such as MEK, xylene or toluene. Cured product may be disposed of without restriction. Un-cured hardener and resin portions should be mixed together and disposed of in a normal manner.

STORAGE, SHIPPING & HANDLING

Store product in a dry location in factory sealed containers at 60 to 90°F. Product shelf life is minimum 12 months in factory-sealed containers. **ECO Weld** is Class 55, not regulated by USDOT shipping regulations.

SAFETY

Refer to Material Safety Data Sheets.

DISCLAIMER

The technical data and any other printed information furnished by Ecolink Products Group, Inc. is true and accurate to the best of our knowledge. This product conforms to Ecolink's in-house quality control procedures and should be considered free of defects. Due to the wide range of applications of this product, it is impossible to assume responsibility for any errors in regard to application, coverage, workmanship, over-spray or injuries resulting from the use of this product. Ecolink Products Group, Inc. makes no warranty, expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.