Crackbond WS100L
Hydrophilic Polyurethane Grout

ADHESIVES TECHNOLOGY CORP. Concrete Solutions for Concrete Applications

TECH DATA SHEET

1. Product Name

Crackbond WS100L Hydrophilic Polyurethane Grout

2. Company

Adhesives Technology Corp.
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Pompano Beach, FL 33064
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Web Address: www.atc.ws

3. Product Description

GENERAL DESCRIPTION
Crackbond WS100L is a single-component, hydrophilic polyurethane that cures when mixed with water. Depending on the amount of water in the mixture, Crackbond WS100L will vary in consistency from a resilient, rubber-like foam to a flexible gel. The product is capable of absorbing water up to 800 percent of its own mass and then deflects excessive water away from penetrating into a structure. Manhole joints are one of the primary places of use.

Underwriters Laboratories Inc. has tested Crackbond WS100L in accordance with the National Sanitation Federation (NSF) standard 61 and has approved this material for contact with potable water.

BASIC USE:
Crackbond WS100L is used for stopping water infiltration in the following applications:

Municipal and Utility Facilities
- Precast manhole joints
- Brick manholes
- Sewer pipes

Pedestrian and automotive Tunnels
- Curtain injection
- Gel encapsulation
- Joint sealing

Concrete Dams & Powerhouse Galleys
- Curtain Injection
- Gel Encapsulation

Temperature Effects On Viscosity	
Temperature	Viscosity
50˚F (10˚C)	1,960 cps
68˚F (20˚C)	1,020 cps
77˚F (25˚C)	850 cps
86˚F (30˚C)	750 cps
104˚F (40˚C)	390 cps

The unique applications and places where **Crackbond WS100L** is used exposes the product to a wide range of weather conditions and temperatures. Temperature of the chemical affects the viscosity (liquid thickness) of the material.

Temperature Effects on Reaction Times at Various Ratios			
Temperature	**Water / Grout Ratio**		
	1:1	**5:1**	**10:1**
70˚F (21˚C)	110 seconds	90 seconds	110 seconds
80˚F (27˚C)	85 seconds	65 seconds	70 seconds
90˚F (32˚C)	65 seconds	55 seconds	60 seconds

SIZE/PACKAGING
Cartridge Sizes: **Crackbond WS100L** is available in:

- 22 oz cartridges; part number: A22-WS100L

Bulk Sizes: **Crackbond WS100L** Call for available bulk sizes:

SHELF LIFE: 12 Months

STORAGE STABILITY: Product must be stored in unopened containers at 40°F – 95°F.

4. Technical Data

Physical Properties (uncured)		
Color	Light brown	Visual
Specific Gravity	1.1	ASTM D891
Viscosity @ 77˚F (25˚C)	800 – 900 cps	ASTM D1638
Solids	100 Percent	

Physical Properties (Cured)					
	Water / Grout Ratio				Tested per ASTM
	1:1	3:1	5:1	8:1	
Gel time (seconds)	110	100	90	100	
Tensile strength	431.1 psi	261 psi	>163.9 psi	>145 psi	D 638
Elongation	462.1%	1,140%	>1,250%	>1,250%	D 638
Die-C tear	49 pli	51.7 pli	43.1 pli	43.3 pli	D 624
Physical form	Resilient Foam		Expansive Gel		

CLASSIFIED UL WATER QUALITY

Crackbond WS100L is approved for use with potable water.

NSF/ANSI 619R55
when mixed with water

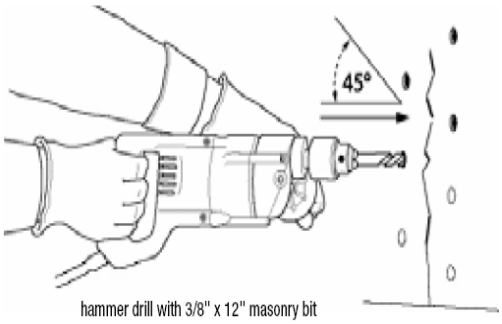
Adhesives Technology Corp.

5. Installation Procedures - To achieve desired results, carefully follow the procedures below!

Prior to using the Crackbond WS100L product, please consult the material safety data sheet for proper handling instructions.

Step 1. Drilling

Drill a series of staggered holes along the full length of the leaking crack. Space the holes 4 to 6 inches apart starting at the bottom. Insert the drill at a 45-degree angle toward the crack.

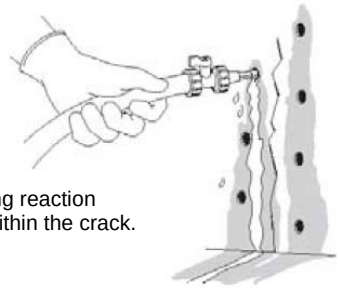


Step 2. Flushing with water

Attach the valve and nozzle supplied with the kit to a garden hose. (A pump sprayer may also be used to supply water.) Starting at the bottom, flush each hole while adjusting the water to a low-pressure stream using just enough water to flush the debris from each hole and to wet the entire crack.

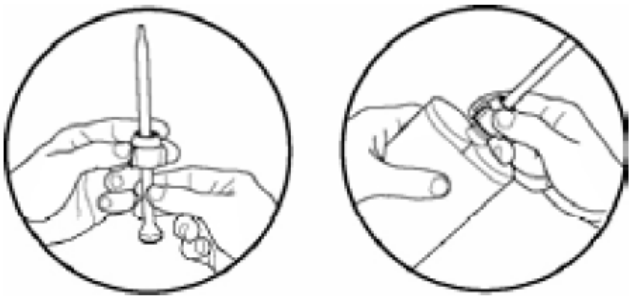
Tip:

Water promotes a foaming reaction of Crackbond WS100L within the crack.



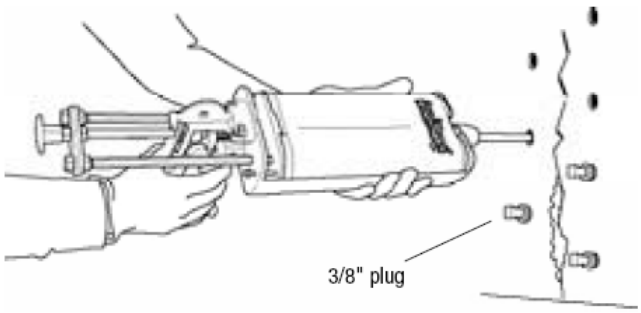
Step 3. Assembling the cartridge

Shake cartridge well before installing nozzle. Remove cap and plug from cartridge. Attach mixing nozzle with retaining nut. Place the cartridge in the dispensing gun.



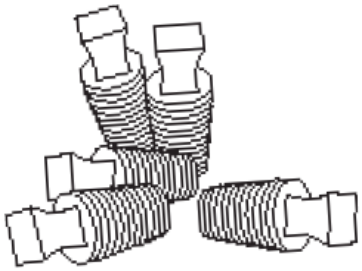
Step 4. Injecting Crackbond WS100L

Working from bottom to top, insert the nozzle into the first hole and squeeze the dispenser trigger three to four times. Continue dispensing until a milky liquid appears. Depending on the size of the leaking crack, one cartridge should be sufficient to treat approximately 8 feet.



Step 5. Inserting plugs

When a milky liquid appears insert a threaded plug into the hole to contain the reacting polyurethane. Allow 30 minutes before pulling out the reusable plugs. If any water reappears, you may need to repeat Steps 1-5 until the crack is repaired.



Tip:
Plugs retain the reacting grout within the crack for easier cleanup.

Step 6. Cleaning and finishing

With a flat-bladed tool, remove any excess grout on the exterior of the crack. Patch any holes using a putty knife, with Miraclebond or similar patching material.

Note: Crackbond WS100L is an Isocyanate Prepolymer mixture and may cause lung damage. May cause eye, skin, and respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. May cause skin reaction. Toxic gases/fumes given off during burning or thermal decomposition.

- Wear protective gloves, clothing, goggles, hearing protection for noise reduction and hard has for falling debris.
- Do not eat, drink or smoke while in active contact with Crackbond WS200B (or other chemicals).
- Avoid skin contact.
- Wash hands thoroughly with soap and cool water. Never wash the skin with a solvent.
- Anyone experiencing difficulty breathing =when working with these materials or showing an allergic reaction should seek fresh air immediately and consult a physician if symptoms persist.
- Depending on the scope of the project, it may be advisable to consult a manufacturer's representative during installation.

Sample Specification – Repair material shall be a single component, hydrophilic polyurethane that cures when mixed with water. It should be supplied in a dual component, side by side cartridges or in pre-measure bulk pails. The material must have a viscosity of 800 – 900 cps, a minimum tensile strength of 431 psi (when mixed at a 1:1 ratio with water) and an elongation of 462%. Repair material shall be **Crackbond WS100L** from Adhesives Technology Corp., Pompano Beach, Florida.

BUILDING CODES
Installation of Crackbond Adhesives must comply with applicable local, state and national code requirements.

SITE CONDITIONS
Material shall be delivered in original unopened containers and stored in a dry environment at a temperature between 40° and 95°F.

PRECAUTIONS
- Wear safety glasses
- Avoid prolonged contact with skin.
- Keep out of reach of children
- Do not take internally
- If Ingested seek medical attention immediately.
- Eye contact. Flush with water for at least 15 minutes. Call a physician immediately.

5. Availability and Cost
AVAILABILITY
Crackbond Adhesives are available through select distributors who can provide you with all of your construction needs. Please contact Adhesives Technology Corp. at (800) 892-1880 for a distributor near you.

COST
Cost information is available from your local distributor.

6. Warranty
All warranties of the product listed herein, in the corresponding ATC catalog, and in any other current literature, expressed or implied, including warranties of merchantability and fitness for a particular purpose are specifically and expressly excluded, with the following exception: At its sole discretion, ATC will repair or replace any product which it considers to be defective in material or workmanship, excepting normal wear and tear within sixty (60) days from the date of purchase from ATC. ATC shall not be liable for any injury, loss or damage, direct, indirect, incidental or consequential or arising out of use of, misuse of, negligence, accident or inability to use any ATC product.

7. Technical Services
For technical support contact Adhesives Technology Corp. at (800) 892-1880.

8. Maintenance
None required.

9. Filing System
Additional product information and specifications are available either on line at www.atc.ws or contact Adhesives Technology at (800) 892-1880 to get copies mailed to you.