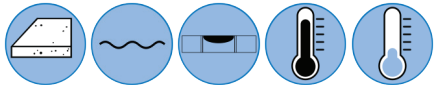


# CRACKBOND® JF-311




## Product Description

CRACKBOND® JF-311 is a two-component, rapid curing, polyurea joint filler designed for heavy duty traffic and freezer applications. It is solvent free, flexible and with its low viscosity and self-leveling design, allows for 10 - 15 % movement of installed joint width. It may be used in temperatures between -40 °F to 120 °F (-40 °C to 49 °C). **This product is highly sensitive to moisture and cannot be used if any dampness is present!**

## General Uses & Applications

- Treats moving cracks
- Used to fill tooled interior/exterior control joints or new construction saw joints on horizontal concrete surfaces
- Protects joint edges from spalling due to wheeled traffic
- For best performance, the maximum joint width is 3/4 in. (19 mm) and joint depth should be a minimum of 3 times the width for industrial floor applications receiving heavy duty vehicle traffic
- Minimum depth can be reduced to 1/2 in. (13 mm), for foot traffic
- May be used for exterior applications when minimal joint movement from thermal cycling will occur
- Keeps joints free of debris and provides a continuous surface for weight loading

## Advantages & Features

- Treated joints can be opened to traffic in 90 minutes at 75 °F (24 °C)
- Self-leveling, low viscosity system
- Acceptable for use in USDA inspected facilities
- Wide application and service temperature range, including freezer applications
- The repaired crack or control joint can be shaved or sanded within a minimum of 60 minutes at 75 °F (24 °C)

**Availability:** Adhesives Technology Corp. (ATC) CRACKBOND products are available through select distributors who can provide you with all your construction needs. Please contact ATC for a distributor near you or visit our website at [www.atcepoxy.com](http://www.atcepoxy.com) to search by zip code.

**Color & Ratio:** Part A (Resin) Amber: Part B (Hardener) Gray, Mixed Ratio: 1:1 by volume, Mixed Color - Concrete Gray

**Storage & Shelf Life:** 18 months when stored in unopened containers in dry conditions. Store between 60 °F (16 °C) and 90 °F (32 °C).

**Installation:** See Manufacturer's Printed Installation Instructions (MPII) available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify that you are using the most current version of the MPII. In order to achieve maximum results, proper installation is imperative.

**Clean Up:** Always wear appropriate protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment using a mild solvent. Cured material can only be removed mechanically.

## Limitations & Warnings:

- **Not for use in expansion joints**
- Color varies during cure and may change in exterior applications.
- Substrate and environment must be completely dry with no moisture present prior to application of CRACKBOND JF-311
- Product should not be stored once opened as exposure to moisture greatly reduces shelf life
- Cartridge balancing and crack repair instructions must be strictly followed
- Not intended for exterior or interior joints that are subject to high movement
- Before applying a topcoat, it is recommended that the user check with coating manufacturer for compatibility with polyurea based products as ATC is not responsible for coating incompatibility

**IMPORTANT:** The user assumes all risks when applying a topcoat. It is recommended to first try a small test area to confirm compatibility and performance. Incompatibility may result in discoloration or adhesion failure of topcoat.

**Safety:** Please refer to the Safety Data Sheet (SDS) for CRACKBOND JF-311 published on our website or call ATC for more information at 1-800-892-1880.

**Specification:** Joint filler material shall be a two-component, 1:1 ratio, solvent free polyurea system. The polyurea material must have a tensile strength of 1,200 psi (8.3 MPa) and an elongation of 82 %, per ASTM D412. Cured adhesive shall have a Shore A hardness of 75 – 80 per ASTM D2240. Adhesive shall be CRACKBOND JF-311 from Adhesives Technology Corp., Pompano Beach, Florida.

#### ORDERING INFORMATION

**TABLE 1: CRACKBOND JF-311 Adhesive, Dispensing Tools and Mixing Nozzles<sup>1,2</sup>**

Package Size	8.6 oz. (254 ml) Cartridge	21.2 oz. (627 ml) Cartridge	10 Gallon (38 L) Kit
Part #	A9-JF311 12PK	A22-JF311N	B5G-JF311-A B5G-JF311-B
Manual Dispensing Tool	TM9HD	TM22HD	N/A
Pneumatic Dispensing Tool	N/A	TA22HD-A	Pump <sup>3,4</sup>
Case Qty.	12		1
Pallet Qty.	1,116	576	12 kits
Pallet Weight (lbs.)	1,058	1,169	1,178
Recommended Mixing Nozzle	T12		



A9-JF311 12PK      A22-JF311N



T12

1. Call for bulk packaging availability and lead times.
2. One mixing nozzle per cartridge is packaged with 8.6 oz. and 21.2 oz. sizes.
3. For bulk dispensing pumps, contact ATC for recommended manufacturers.
4. Assure proper fit of equipment. Contact ATC for further instructions.



TM9HD



TM22HD



TA22HD-A



One tool, dual grip configurations

#### MATERIAL SPECIFICATION

**TABLE 2: CRACKBOND JF-311 performance to ASTM C881-14<sup>1,2,3</sup>**

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature
				75 °F 24 °C
Gel Time - 60 Gram Mass <sup>4</sup>	----	C881	min	3
Tack Free Cure Time <sup>5</sup> (30 mil Thin Film)	----	D2377	min	28
Mixed Viscosity <sup>6</sup>	----	M2393	cP	500
Pot Life <sup>5,7</sup>	----	----	min	2.5
Tensile Strength	7 day	D412	psi (MPa)	1,200 (8.3)
Tensile Elongation			%	82
Bond Strength	2 day	C882	psi (MPa)	400 (2.8)
Shore A Hardness	----	D2240	----	75 - 80
Adhesion to Concrete	----	D4541	psi (MPa)	275 (1.9)

1. Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.
2. Full cure is listed above to obtain the give properties for each product characteristic.
3. Results may vary due to environmental factors such as temperature, moisture and type of substrate.
4. Gel time may be lower than the minimum required for ASTM C881.
5. Property not referenced in ASTM C881.
6. Mixed viscosity measured at 30 seconds.
7. Pot life is measured as the workable and applicable time of 1.0 gallon (3.8 L) when mixed.

**TABLE 3: CRACKBOND JF-311 CURE SCHEDULE<sup>1,2,3</sup>**

Base Material Temperature	Working Time	Trim/Shave Time	Full Cure Time
°F (°C)			
0 (-18)	5 min	6 hr	48 hr
75 (24)	3.5 min	60 min	24 hr
120 (49)	1.5 min	20 min	12 hr

1. Working and full cure times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge/nozzle system performance. Working time is based on material conditioned to 75 °F (24 °C).
2. Application Temperature: Substrate and ambient air temperature should be from -40 to 120 °F (-40 to 49 °C).
3. When ambient or base material temperature falls below 40 °F (4 °C), condition the adhesive to 40 to 85 °F (4 to 29 °C) prior to use.
4. Trim/Shave times are estimates and based on 1/2 in. (13 mm) bead. At -40 °F (-40 °C) trim/shave time is approximately 10 hours.

#### INSTALLATION INSTRUCTIONS (MPII)

##### Joint Preparation

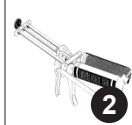
- **Do not use in Expansion Joints;** Use for exterior and interior control joints or moving cracks
- Concrete should be at least 28 days old and bonding surface must be dry
- Heavy Duty Traffic Areas: The joint width should be a maximum of 3/4 in. (19 mm); The depth should be a minimum of 3 times the width, or 2.2 in. (57 mm)
- Light Foot Traffic Areas: The joint width should be a maximum of 3/4 in. (19 mm); The depth should be a minimum of 1/2 in. (13 mm)

**NOTE:** CRACKBOND JF-311 is not intended for joints subject to high movement but will accommodate 10 - 15 % movement.

##### Cartridge Preparation



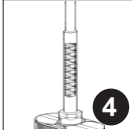
**Shake the cartridge vigorously for 60 seconds**, then stand cartridge upright for at least 1 minute allowing any bubbles to rise to the top.



Insert cartridge into the dispenser. Make sure it is properly positioned with the shoulder of the cartridge flush with the front/top bracket of the dispenser. Point upward at a 45° angle. Remove the plastic cap and plug from the top of the cartridge.

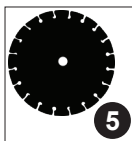


**IMPORTANT:** Before attaching nozzle, balance the cartridge by slowly dispensing a small amount of material into a disposable container until both components flow evenly from the cartridge. Install mixing nozzle onto cartridge.



Continue to point the nozzle upward away from yourself and others while slowly applying pressure to dispenser moving any bubbles and product up through the nozzle until it reaches the tip. Dispense the first full stroke of material into disposable container. The cartridge is now purged and ready for use. **NOTE:** Schedule dispensing to consume an entire cartridge at one time with no interruption of flow to prevent material from hardening in mixing nozzle. If you have any problems in dispensing product, replace the nozzle; the product may have begun to cure in the nozzle which will affect the mix ratio. Never transfer a used nozzle to a new cartridge. Repeat the cartridge balancing steps listed above after replacing the nozzle.

##### Repairing Cracks or Filling Control Joints



Substrate and environment must be **completely dry without any presence of moisture** prior to usage. To fill cracks, use a saw or grinder with a dry diamond or concrete abrasive blade and cut along the crack opening it up to 1/8 in. to 1/4 in. wide. The edges must be a 90° angle to the surface (see Figure 2) to avoid a feathered edge (see Figure 1). See Joint Preparation section above for joint width/depth information. To repair a control joint, fill all spalls with CRACKBOND CSR polyurethane and allow to cure. Recut the control joint to remove all filler materials and to reshape the spall repairs.



Figure 1

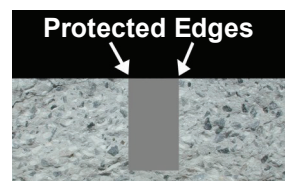
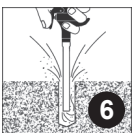
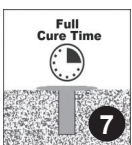


Figure 2



Blow out and remove all dust, dirt, debris, oil and any other contaminant from the control joint or crack. Use backer rod or kiln dried sand prior to application of adhesive. Allow sufficient depth for joint filler based upon minimum recommended depth of filler. Place mixing nozzle directly over the joint or repair area. Dispense material using full smooth trigger pulls (no short, choppy strokes) and allow material to gravity feed into the crack/joint.



For joints to be shaved, overfill the crack/joint so that material is slightly higher than the face of the concrete slab you are repairing. Allow product to cure for a minimum of 60 minutes at 75 °F (24 °C ) then use a sharp floor scraper to shave excess material from top surface. Full cure times are temperature dependent (see Table 3).

#### TECHNICAL DATA

**TABLE 4: CRACKBOND JF-311 COVERAGE CHART**

Joint Size in. (mm)	Linear Feet per Gallon (Linear Meter per Liter)	Linear Feet per 8.6 oz. Cartridge (Linear Meter per 254 ml Cartridge)	Linear Feet per 21.2 oz. Cartridge (Linear Meter per 627 ml Cartridge)
1/8 x 1 (3.18 x 25.40)	154.0 (12.40)	10.3 (3.14)	25.5 (7.77)
1/8 x 1-1/4 (3.18 x 31.75)	123.2 (9.92)	8.3 (2.53)	20.4 (6.22)
1/8 x 1-1/2 (3.18 x 38.10)	102.7 (8.27)	6.9 (2.10)	17.0 (5.18)
1/8 x 1-3/4 (3.18 x 44.45)	88.0 (7.10)	5.9 (1.80)	14.6 (4.45)
1/8 x 2 (3.18 x 50.80)	77.0 (6.20)	5.2 (1.58)	12.8 (3.90)
3/16 x 3/4 (4.76 x 19.05)	136.9 (11.02)	9.2 (2.80)	22.7 (6.92)
3/16 x 1 (4.76 x 25.40)	102.7 (8.27)	6.9 (2.10)	17.0 (5.18)
3/16 x 1-1/4 (4.76 x 31.75)	82.1 (6.61)	5.5 (1.68)	13.6 (4.15)
3/16 x 1-1/2 (4.76 x 38.10)	68.4 (5.51)	4.6 (1.40)	11.3 (3.44)
3/16 x 1-3/4 (4.76 x 44.45)	58.7 (4.73)	3.9 (1.19)	9.7 (2.96)
3/16 x 2 (4.76 x 50.80)	51.3 (4.13)	3.4 (1.04)	8.5 (2.59)
1/4 x 1 (6.35 x 25.40)	77.0 (6.20)	5.2 (1.58)	12.8 (3.90)
1/4 x 1-1/4 (6.35 x 31.75)	61.6 (4.96)	4.1 (1.25)	10.2 (3.11)
1/4 x 1-1/2 (6.35 x 38.10)	51.3 (4.13)	3.4 (1.04)	8.5 (2.59)
1/4 x 1-3/4 (6.35 x 44.45)	44.0 (3.54)	3.0 (0.91)	7.3 (2.23)
1/4 x 2 (6.35 x 50.80)	38.5 (3.10)	2.6 (0.79)	6.4 (1.95)
1/2 x 1 (12.70 x 25.40)	38.5 (3.10)	2.6 (0.79)	6.4 (1.95)
1/2 x 1-1/4 (12.70 x 31.75)	30.8 (2.48)	2.1 (0.64)	5.1 (1.55)
1/2 x 1-1/2 (12.70 x 38.10)	25.7 (2.10)	1.7 (0.52)	4.3 (1.31)
1/2 x 1-3/4 (12.70 x 44.45)	22.0 (1.77)	1.5 (0.46)	3.6 (1.10)
1/2 x 2 (12.70 x 50.80)	19.3 (1.55)	1.3 (0.40)	3.2 (0.98)
3/4 x 1 (19.05 x 25.40)	25.7 (2.06)	1.7 (0.53)	4.3 (1.31)
3/4 x 1-1/4 (19.05 x 31.75)	20.5 (1.65)	1.4 (0.42)	3.4 (1.04)
3/4 x 1-1/2 (19.05 x 38.10)	17.1 (1.38)	1.1 (0.35)	2.8 (0.85)
3/4 x 1-3/4 (19.05 x 44.45)	14.7 (1.18)	1.0 (0.30)	2.4 (0.73)
3/4 x 2 (19.05 x 50.80)	12.8 (1.03)	0.8 (0.26)	2.1 (0.64)

This is a general table for estimating product usage.



**Chemex Industries, Inc.**

3 Chattanooga, Irvine, CA 92620 • Phone: 714-832-8441 • Fax: 714-832-8103