

## **CRACKBOND<sup>®</sup>** **JF-90 HD**

### Semi-Rigid Epoxy



#### Product Description

CRACKBOND<sup>®</sup> JF-90 HD is a two-component, moisture insensitive heavy duty epoxy joint filler and crack filling material. Its semi-rigid design allows for use in industrial floors exposed to hard-wheeled forklift traffic. It may be used in temperatures between 60 °F and 120 °F (16 °C and 49 °C).

#### General Uses & Applications

- Used to fill concrete control joints
- Fill cut or formed contraction/construction joints
- Crack filler for cracks, spalls and concrete control joints

#### Advantages & Features

- Semi-rigid formula allows for moderate joint movement
- Heavy-duty formulation with Shore A Hardness of 90
- Protects joint edges from spalling due to wheeled traffic
- Keeps joints free of debris and provides a continuous surface for weight loading
- Shaves easily
- Paintable
- Cures on damp surfaces
- Easy to mix - 1:1 ratio
- Self-priming
- Moisture insensitive
- Does not embrittle with age

**Availability:** Adhesives Technology Corp. (ATC) products are available online and through select distributors serving all your construction needs. Please contact ATC for a distributor near you or visit [www.atcepoxy.com](http://www.atcepoxy.com) to search for a distributor by zip code.

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

**Storage & Shelf Life:** For best results, store between 40 °F and 90 °F (4 °C and 32 °C) in dry and dark conditions. Bulk shelf life is 24 months and cartridge shelf life is 12 months when stored in unopened containers.

**Installation:** See Installation Instructions available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify and use the most current instructions. In order to achieve maximum results, proper installation is imperative.

**Clean-Up:** Always wear appropriate personal protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment using a mild solvent, such as CRACKBOND<sup>®</sup> INDUSTRIAL CITRUS CLEANER from Adhesives Technology Corp. Cured material may only be removed mechanically using a sander or grinder. Collect with absorbent material. Flush area with water. Dispose of in accordance with local, state and federal disposal regulations.

#### Limitations & Warnings:

- For professional use only
- Do not thin with solvents, as this will prevent cure
- Product should not be installed on new concrete floors until maximum concrete shrinkage has occurred in accordance with ACI 302
- Do not install until building is under permanent temperature control
- Resistance to traffic levels depends on sufficient bond area with in the joint; Deeper saw cuts provide more bond area for filler to resist loading; Use of backer rod or sand in joints reduces bond area and will reduce load resistance of any product
- Use of backer rod is not recommended for forklift traffic
- For best results, saw cuts should be installed to full depth and at least 1 in. deep in formed joints
- Epoxies may yellow, discolor, or chalk upon exposure to strong sources of Ultra-Violet radiation such as from sunlight, and some types of industrial artificial lighting
- Substrate temperatures should be a minimum of 40 °F
- Do not expose stored or uncured product to cold or hot temperatures below 40 °F (4 °C) or above 90 °F (32 °C) for any length of time

**Safety:** Please refer to the Safety Data Sheet (SDS) for CRACKBOND JF-90 HD published on ATC's website or call for more information at 1-800-892-1880.

**Specification:** Joint filler material shall be a two component, 1:1 mix ratio semi-rigid epoxy. At 2 day cure, Shore A Hardness shall be 90 and Shore D Hardness shall be 45 per ASTM D2240. Joint filler shall be CRACKBOND JF-90 HD from Adhesives Technology Corp., Pompano Beach, Florida.

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**TABLE 1: CRACKBOND JF-90 HD Packaging<sup>1,2</sup>**

Package Size	20.3 fl. oz. (600 ml) Cartridge	2 Gallon (7.6 L) Kit	10 Gallon (38 L) Kit
Part #	A20-JF90	B2G-JF90	B5G-JF90-A B5G-JF90-B
Pneumatic Dispensing Tool	T12	Pump	
Case Qty.	12	1	
Pallet Qty.	576	72	12
Pallet Weight (lb.)	1,169	1,480	1,660

- Each cartridge is packaged with one mixing nozzle.
- Contact ATC for recommended bulk dispensing manufacturers.



**A20-JF90**

**B2G-JF90**



**B5G-JF90-A / B5G-JF90-B**

**TABLE 2: CRACKBOND JF-90 HD performance to ASTM Standards<sup>1,2,3</sup>**

Property	Cure Time	ASTM Standard	Units	Sample Conditioning Temperature
				75 °F 24 °C
Gel Time 60 Gram Mass	----	C881	min	12
Tack-Free Time (30 mil Thin Film)	----	D2377	hr	2.33
Viscosity	----	D2196	cP	Part A: 4,030 Part B: 9,500 Nozzle mixed: 3,100
Tensile Strength	7 day	D638	psi (MPa)	1,000 (6.9)
Tensile Elongation			%	49.2
Bond Strength Hardened to Hardened	14 day	C882	psi (MPa)	690 (4.8)
Shore A Hardness	2 day	D2240	----	90
	14 day			98
Shore D Hardness	2 day	D2240	----	45
	14 day			55
Adhesion to Concrete	24 hr	D7234	psi (MPa)	270 (1.9)

**TABLE 3: CRACKBOND JF-90 HD CURE SCHEDULE<sup>1,2,3</sup>**

Base Material Temperature	Working Time	Trim/Shave Time <sup>4</sup>	Full Cure Time
°F (°C)			
75 (24)	75 min	3.0 - 5.0 hr	20 hr
90 (35)	60 min	2.5 - 4.5 hr	16 hr
120 (49)	30 min	2.0 - 3.5 hr	10 hr

- Working and full cure times are approximate, may be linearly interpolated between listed temperatures and are based on cartridge/nozzle system performance.
- Application Temperature: Substrate and ambient air temperature should be between 60 and 120 °F (16 and 49 °C).
- When ambient or base material temperature falls below 60 °F (16 °C), condition the product between 60 and 85 °F (16 and 29 °C) prior to use.
- Trim/Shave times are estimates and based on a 1/2 in. (13 mm) bead. At 75 °F (24 °C), some installers may prefer to wait 1 hour depending upon installation conditions. NOTE: Warming the CRACKBOND JF-90 HD control joint filler after the maximum time will extend shave window.

- Results based on testing conducted on a representative lot(s) of product. Average results will vary according to the tolerances of the given property.
- Full cure is listed above to obtain the given properties for each product characteristic.
- Results may vary due to environmental factors such as temperature, moisture and type of substrate.

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### Surface Preparation

(New Concrete) - Joints to be filled must be clean, free of curing compounds and structurally sound. Remove all oil, grease, dirt, laitance, curing compounds and any other foreign material that may cause issues with bonding. Abrasive cleaning and mechanical removal methods, such as a diamond grinding wheel are recommended. Area must be free of all dust and debris prior to installation.  
(Existing Concrete) - In existing concrete, the old joints must be routed out to remove old material and widen, if necessary.



### Cartridge Preparation

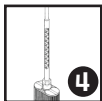
**Shake the cartridge vigorously for 20 seconds**, then stand cartridge upright for at least 1 minute allowing any bubbles to rise to the top.



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 about a 45° angle.



Remove the plastic cap and plug from the top of the cartridge. Find the flow control inside the threaded end of the mixing nozzle. Insert flow control into the two holes at the top of the cartridge where the product comes out. Make sure it is securely seated in place.



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. **CAUTION: Never point mixing nozzle toward yourself or others while dispensing, as low viscosity materials can travel some distance from the end of the nozzle if dispensed too rapidly.**



Dispense a full stroke of material into disposable container. The cartridge is now balanced 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 product hardens in nozzle and will not easily flow out, replace nozzle and repeat the cartridge balancing steps listed above after replacing the nozzle. Never transfer a used nozzle to a new cartridge.

**BULK** - Premix each component separately, then mix equal volumes of Part A and Part B for 3 minutes with a low speed drill (300 rpm), using a Jiffy Mixer paddle or similar. Mix only the amount that may be used within the working time. See bulk pump user manual for pump instructions.

### Placement

Fine clean sand may be used to close off small shrinkage cracks in the bottom of joints prior to placement of CRACKBOND JF-90 HD. In accordance with ACI 302, semi-rigid epoxy fillers should be installed full depth in saw cut joints and at least 1 in. deep in formed joints. For best results, apply material between 65 °F - 85 °F (18 °C - 29 °C). JF-90 HD may be installed with a caulking gun or poured into the joint from a suitable container. Two passes may be required, as pourable leveling materials will settle in the joint. The second pass must be made within 12 hours at 75 °F (24 °C). Ultimately, the filled joint should be flush with the floor surface. Another installation technique is to overfill the joint, then once tack free, cut the JF-90 HD flush with a razor knife. A heat gun can facilitate cutting if it has hardened. Avoid overheating the cured JF-90 HD. See Limitations and Warnings section for use of backer rod and sand warning.