

RHINO CARBON FIBER™ CONCRETE CRACK LOCK® KIT INSTRUCTIONS

Revision Date 05/05/2021

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01

WHAT COMES IN THE CONCRETE CRACK LOCK® KIT?



KIT INCLUDES

- (20) Rhino Carbon Fiber™ Concrete Crack Lock® Stitches
- (1) Tube of High Strength Anchoring Epoxy Paste
- (1) Static epoxy mixing nozzle
- Gloves and instructions

PRODUCTS COMMONLY USED WITH THIS REPAIR



Rhino Carbon Fiber™ Dual Epoxy Gun
300/300 ml or 300/150 ml gun



Rhino Dual Power Epoxy Gun
300/300 ml gun



Tough Wipes by Rhino Carbon Fiber™
Removes Epoxy!

RECOMMENDED POWER TOOLS

(TOOLS MAY VARY DEPENDING ON PROJECT)

5-Inch Surface Grinding Dust Shroud Kit



Use before and after installation
**USE DIAMOND CUP WHEEL

10-Gallon HEPA Dust Extractor



Collects dust while attached to
grinder and shroud tools

Tuck Point Grinder with Dust Shroud Attachment



Use to cut across crack
**USE SINGLE DIAMOND BLADE

Hammer Drill



Use to drill holes
**USE CHISEL OR SPADE TIP ATTACHMENT

YOU WILL ALSO NEED...

- Safety goggles
- Respirator mask
- Hard hat
- Coveralls
- Drop cloth/plastic
- Marker
- Hammer
- Epoxy gun
- Measuring tape
- Putty knife

SAFETY WARNINGS

Please read and follow safety procedures for all tools and wear proper safety equipment during installation.

While using power tools, follow all EPA/OSHA guidelines for lead paint removal and respiratory protection. For more information visit www.epa.gov or www.osha.gov.



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PLEASE READ ALL DIRECTIONS CAREFULLY & WEAR SAFETY GOGGLES BEFORE INSTALLING



01 PREP

- Lay plastic or drop cloth around work surface (if needed)
- Grind across the surface of the crack to ensure it is smooth
- Remove all loose concrete & debris

Tools: grinder, plastic, drop cloth, or tape



02 CONCRETE CRACK LOCK™ LOCATIONS

- Mark the first Concrete Crack Lock® (CCL) as close to the beginning of the crack as possible
- The CCL's should be installed every 8" to 12" (20 cm to 30 cm) roughly perpendicular to the crack. Vary the angle slightly to reinforce the crack in all directions.
- Center the CCL over the crack and trace the outline of the CCL

Tools: marker and measuring tape



03 CUTTING

- Using the tuck point grinder with a .08" (2 mm) thick blade, make the cut across the crack for the Concrete Crack Lock®
- The cut should be around 5/8" deep to provide approximate 1/8" (3 mm) coverage above and below the CCL
- Make sure the cut is full depth from hole location to hole location

Tools: tuck point grinder



04 DRILL

- Line the Concrete Crack Lock® ends up with the cut
- Mark and drill the holes the same depth as the cut
- Drill 1/2" (13 mm) holes at each end of the cut where the Concrete Crack Lock® ends will be inserted

Note: a 5/8" drain hole may be drilled to aid in providing proper fit, but they will require additional epoxy to fill

Tools: drill, 1/2 inch masonry drill bit



1. First fill hole

05 INSTALL

1. Fill the cut and holes with the High Strength Anchoring Epoxy Paste
2. Insert the Concrete Crack Lock® into the cut and work it in to ensure all voids around the CCL are completely filled
3. Top off the cut with the High Strength Anchoring Epoxy Paste until it is even with the concrete surface
4. Scrape away any excess epoxy and apply to the crack or the next CCL location

Note: Areas around the CCL can be taped off to aid in a cleaner installation.

Tools: putty knife



2. Press the Concrete Crack Lock® into epoxy



3. Apply epoxy over the Concrete Crack Lock®



4. Scrape away excess epoxy



06 FINISHING PRODUCT (optional)

- If the epoxy settles you can add more epoxy to the cuts. You can grind any excess epoxy off with a grinder once it has cured
- Once the High Strength Anchoring Epoxy Paste has dried and all clean up/grinding has been completed, you can paint or seal over the repairs

SAFETY DATA SHEET

RCF™ High Strength Anchoring Epoxy Paste | Revision Date 05/05/2021

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01: PRODUCT & COMPANY IDENTIFICATION

RHINO PRODUCTS USA, INC.
8383 Riley Street,
Zeeland, MI USA 49464

Product Name: RCF™ High Strength Anchoring Epoxy Paste
Common Name: Polyamine

Product Code: RCF-HSEP
Chemical Family: Polyamine
Synonyms: Amines Liquid Corrosive
Product Use: Epoxy Bonding Agent
Emergency Phone: CHEMTREC 1 800 424 9300

02: HAZARDS IDENTIFICATION

GH Classification	CATEGORY
HEALTH HAZARD	1B
Skin Corrosion	1B
Eye damage	1
Skin Sensitizer	1
Acute Toxicity, Oral	4
Acute Toxicity, Inhalation	4
Aquatic Toxicity	3

Hazard Statement

Harmful if swallowed or inhaled. Causes severe skin burns and serious eye damage. May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects.

Precautionary Statement

Use only outdoors or in well ventilated area. Avoid breathing mist, vapors or spray. Wear protective clothing, gloves and eye and face protection. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

03: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:

Cas#	Chemical Name	%	OSHA PEL	ACGUH TLV
Component A				
25085-99-8	Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	>40%	NE	NA
13463-67-7	Titanium Dioxide	<20%	NE	NE
1317-65-3	Calcium Carbonate	<30%	NE	NE
68611-44-9	Amorphous Silicon Dioxide	<10%	NE	NE
Component B				
6895-36-6	Polyamido amine	<40%	NE	NE
68611-44-9	Amorphous Silicon Dioxide	<10%	NE	NE
1317-61-9	Iron Oxide black	<10%	NE	NE
1317-65-3	Calcium Carbonate	>40%	NE	NE

None of the remaining components are considered a hazardous material or carcinogen (1910.1200 Hazard Communication (d) 4.)

NE= Not Established NA=Not Applicable

04: FIRST AID MEASURES

General Advice:	Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped trained personnel should begin cardiopulmonary resuscitation immediately.
Inhalation:	If respiratory irritation occurs, go to fresh air, flood work area with fresh air. If irritation continues seek medical attention.
Skin Contact:	Remove contaminated clothing and shoes. Wash affected area(s) thoroughly with soap and water. If irritation persists, seek medical attention. SOLVENTS SHOULD NOT BE USED because they carry the irritant into the skin.
Eye Contact:	Flush the eyes with plenty of water for at least 15 minutes. If necessary, gently hold eyelids open during the flush. Immediately seek medical attention.
Ingestion:	Obtain immediate medical attention. Do not induce vomiting. Should vomiting occur, be sure to keep victim's head below hips to avoid aspiration of vomit into the lungs.

05: FIRE FIGHTING MEASURES

Special Fire Fighting Procedures: none. Avoid breathing smoke. NFPA Class B-C extinguisher (dry chemical or foam) for class 1C fires. Water spray may be ineffective on fire but can protect fire-fighters and cool closed containers. Use fog nozzels if water is used. Use supplied breathing masks.

Protection of firefighters: Fire may produce irritating, corrosive and/or toxic gases. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots and in enclosed spaces SCBA. Structural firefighters protective clothing will only provide limited protection.

RCF
REINFORCEMENT PRODUCTS

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06: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Keep people away from and upwind of spill/leak. Avoid inhalation of vapors and spray mists. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Follow facility/company's emergency plans.
Small Spills:	Absorb with an inert material (sand, vermiculite). Sweep or scoop up and put into disposal containers. Flush area immediately with water (prevent water from entering waterways).
Large Spills:	Dike area far ahead of liquid spill for later disposal. Do not release into sewers or waterways. Absorb with an inert material (sand, vermiculite). Sweep or scoop up into disposal containers. Flush area immediately with water (prevent water from entering waterways)
Regulatory Requirements:	Follow applicable OSH regulations (29 CFR 1910.120). Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area or until spill clean-up has been completed.

07: HANDLING AND STORAGE

Handling Precautions:	For professional use only. Avoid eye/skin contact. Wash after using and before eating or smoking. Avoid breathing vapors. Use as directed. Avoid uncontrolled mixing with other mixtures (strong acids, bases and oxidizers). Do not use solvent to thin. Respiratory protection is required when ventilation is inadequate. NIOSH/OSHA approved respirators should be provided and worn.
Storage Requirements:	Store in cool/dry location. Do not allow material to freeze, as product may be damaged. Store away from sparks and open flames.

08: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	HMIS PP, H Splash Goggles, Gloves, Apron, Vapor Respirator Use local and general exhaust ventilation to maintain airborne concentrations below TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.
Personal Protective Equipment	RESPIRATORY PROTECTION: None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up. EYE/FACE PROTECTION: Wear splash proof chemical goggles/ full face shield if there is a potential for splashing. SKIN / BODY PROTECTION: Wear Suitable gloves (neoprene, nitrile rubber or PVC) and protective clothing to mitigate exposure. OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

09: PHYSICAL & CHEMICAL PROPERTIES

Appearance: CE308	Part A (white paste) CE308	Part B (black paste)	Percent Volatile:	0
Physical State	paste		Flash Point:	>200°F
Boiling Point:	ND		Flash Point Method:	Pensky Martens Closed Cup
Odor:	Part A (Mild)	Part B (Amine odor)	Burning Rate:	No data available
Freezing/Melting Point:	ND/NE		Autoignition Temp:	No data available
pH:	ND		LEL:	NA
Solubility:	Insoluble			
Vapor Pressure:	NE			
Vapor Density:	(Air = 1) > 1			
Spec Grav./Density:	Part A (1.2)	Part B (1.8)		
VOC:	0			
Evap Rate:	Slower than Butyl Acetate			
Viscosity:	Brookfield 500,000 cps (Part A), 500,000 cps (Part B)			

10: STABILITY AND REACTIVITY

Stability:	Stable
Conditions to Avoid:	None
Materials to Avoid:	Strong oxidizers, acids and bases
Hazardous Decomposition Products:	CO, CO2, NOX
Hazardous Polymerization:	None

11: TOXICOLOGICAL INFORMATION

Inhalation:	Harmful if inhaled and may cause delayed lung injury. Can cause severe respiratory tract burns. Risk of serious damage to the lungs. May cause nose, throat and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Skin Contact:	Causes skin burns.
Eye Contact:	Causes eye burns. May cause blindness. Severe eye irritation.
Ingestion:	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Prolonged exposure	Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat, Eye disease, Skin Disorders and Allergies.

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage.



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12: ECOLOGICAL INFORMATION

Aquatic toxicity: Very toxic to aquatic organisms, may cause long term adverse effects in the
Toxicity to other organisms: No data available

13: DISPOSAL CONSIDERATIONS

When disposed of properly, this material does not meet RCRA classification or listing for hazardous waste. Never dispose of liquid to a landfill. Spilled material should be stabilized or solidified prior to disposal. Once stabilized/solidified, the material may be disposed of through normal means. Certain localities and state laws have specific disposal requirements for non-hazardous industrial chemicals. Consult local municipal authorities, landfill personnel or disposal companies for details prior to any disposal activity. Always follow local, state and federal regulations.

14: TRANSPORT INFORMATION

CE308 Part A: Not hazardous for domestic ground shipment
CE308 Part A IMDG: Limited Quantity not hazardous. Not Regulated.
Bulk Quantity: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (epoxy resin) 9 III MARINE POLLUTANT

Part B: Limited Quantity, Not regulated.
Bulk Quantity: UN 2735 Amines, Liquid, Corrosive, n.o.s. (nonylphenol) 8 II
Part B IMDG: Limited Quantity, Not regulated.
Bulk Quantity: UN 2735 Amines, Liquid, Corrosive, n.o.s. (nonylphenol) 8 II MARINE POLLUTANT - Segregation Group: 18 Alkalis
Placards required over 1,000 lbs.

15: REGULATORY INFORMATION

This product is a "Hazardous Chemical" as defined by the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 (SARA)		
Hazard Categories	Immediate Hazard	Yes
	Delayed Hazard	Yes
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No
Section 302 Extremely hazardous substance		No
Section 311 Extremely hazardous chemical		Yes

State Regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16: OTHER INFORMATION

Rating Scale: 0-4
HMIS II ratings: Health = 3, Fire = 1, Reactivity = 2
HMIS III ratings: Health = 3, Fire = 1, Physical Hazard = 2
NFPA ratings: Health = 3, Fire = 1, Reactivity = 2

The information and recommendation in this document are based on the best information available to us at the time of preparation. We make no other warranty, expressed or implied, as to its correctness or completeness, or as to the results or reliance of this product.

This product has been classified according to the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

User Responsibility: The information in this document cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions, in addition to those described herein, are required. Any health hazard and safety information herein should be distributed to customers or employees as applicable.

17: DISCLAIMER

The information contained herein is, to the best of our knowledge and belief, accurate and current as of the date of this SDS. However, since the conditions of handling and use are beyond our control, we make no guarantee of results and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representation or warranties, either expressed or implied, as to its correctness or completeness, or as of merchantability, fitness for a particular purpose, or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers or as to the results or reliance of this product. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

END OF SDS DOCUMENT



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