



REINFORCEMENT PRODUCTS

RCF Slow-Curing Saturant-Adhesive Epoxy – Part A

SAFETY DATA SHEET

1. GENERAL INFORMATION

Product name: RCF Slow-Curing Saturant-Adhesive Epoxy – Part A
Common name: Epoxy Resin Compound
Chemical family: Epoxy
Product Use: Epoxy Bonding Agent
Manufacturer: RHINO PRODUCTS USA, INC.
8383 Riley Street
Zeeland, MI 49464
1-888-684-3889

info@rhinocarbonfiber.com

Emergency Contact# CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

Health Hazard	Category
Skin Irritation	2
Eye Irritation	2A
Skin Sensitization	1
Aquatic Chronic	2

Signal Word: **WARNING**



Hazard Statements

H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Wear eye protection / face protection.
Avoid release to the environment.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Collect spillage.

NE = Not Established

NA = Not Applicable

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Take off contaminated clothing and wash it before reuse.

Hazards not Otherwise Classified

Severe Eye Irritant

Skin Irritant

May Cause Sensitization by Skin Contact

3. COMPOSITION/INGREDIENT INFORMATION

Ingredients:

<u>Cas#</u>	<u>Chemical Name</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGUH TLV</u>
Part A				
25085-99-8	Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	>80%	NE	NA
68609-97-2	Aliphatic Glycidyl Ether	<20%	NE	NE

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

4. 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:	Supply fresh air and call a doctor.
Skin Contact:	Immediately wash with water and soap and rinse thoroughly.
Eye Contact:	Rinse opened eyes for several minutes under running water. If symptoms persist, consult a doctor.
Ingestion:	Drink copious amounts of water and provide fresh air. Immediately call a doctor. Should vomiting occur, turn victim's head to the side. Be sure to keep victim's head below hips to avoid aspiration of vomit into the lungs.

5. FIRE FIGHTING MEASURES

Special Fire Fighting Procedures: 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 nozzles 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Protective Equipment: Splash Goggles, Gloves, Apron

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.

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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 OSHA 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.

7. HANDLING AND STORAGE

Handling Precautions: For professional use only. Avoid eye/skin contact. Wash after using and before eating or smoking. Use as directed. Avoid uncontrolled mixing with other mixtures (strong acids, bases and oxidizers).

Storage Requirements: Store in cool/dry location. Do not allow material to freeze, as product may be damaged. Do not handle, store or open near an open flame, sources of heat or sources of ignition.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

HMIS PP, H I Splash Goggles, Gloves, Apron

VENTILATION: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents containment dispersion into the work area controlling it as its source.

RESPIRATORY PROTECTION: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear OSHA/NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.

PROTECTIVE CLOTHING/EQUIPMENT: Wear chemically protective gloves, boots and aprons to prevent prolonged or repeated skin contact. Wear protective goggles and face shield, per OSHA eye and face protection (29 CFR 1910.133).

CONTAMINATED EQUIPMENT: Separate contaminated work clothing from street clothing. Launder before reuse. Remove this material from your work shoes and clean personal protective equipment.

OTHER PRECAUTIONS: Never eat, drink or smoke in work areas.

This material is not listed by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear to light amber
Physical State	Liquid
Boiling Point:	ND
Odor:	Mild
Freezing/Melting Point:	ND/NE
pH:	ND
Solubility:	ND
Vapor Pressure:	Insoluble
Vapor Density:	NE
Spec Grav./Density:	(Air = 1) > 1
VOC:	1.19
Evap Rate:	0
	Slower than Butyl Acetate
Percent Volatile:	0
Flash Point:	>200° F
Flash Point Method:	Pensky Martens
Closed Cup Burning Rate:	No data available
Autoignition Temp:	No data available

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes serious eye irritation.
Respiratory or Skin Sensitization: May cause an allergic skin reaction.
Germ Cell Mutagenicity: Not classified
Acute Toxicity: Not classified
Teratogenicity: Not available
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Symptoms/Injuries After Skin Contact: Exposure may produce an allergic reaction.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.
This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.

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 a 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, disposal companies for details prior to any disposal activity. Always follow local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated for transport.

IMDG: Not regulated for transport*. For single or inner packagings greater than 5L: UN 3082 Environmentally Hazardous Substances, Liquid, n.o.s. (epoxy resin), Marine Pollutant, 9 III

IATA: Not regulated for transport*. Non-bulk packagings (<119 Gal) are excepted from being classed as a Marine Pollutant per 49 CFR 171.4(c)(2), IATA DGR Special Provision A197.

TDG: Not regulated for transport. This product meets the specifications set forth by Special Provision 99.

*In quantities not to exceed 5kg/5L per single or inner packaging, marine pollutants are not subject to regulation by ground, air, or vessel. See 49 CFR 171.4(c)(2), IATA DGR Special Provision A197, and IMDG Code 2.10.2.7.

15. REGULATORY INFORMATION

This product is not hazardous.

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 = 1, Fire = 1, Reactivity = 0
HMIS III ratings:	Health = 1, Fire = 1, Physical Hazard = 0
NFPA ratings:	Health = 1, Fire = 1, Reactivity = 0

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.

1. GENERAL INFORMATION

Product name: RCF Slow-Curing Saturant-Adhesive Epoxy – Part B
Common name: Polyamine
Chemical family: Polyamine
Product Use: Epoxy Bonding Agent
Manufacturer: RHINO PRODUCTS USA, INC.
8383 Riley Street
Zeeland, MI 49464
1-888-684-3889
info@rhinocarbonfiber.com

Emergency Contact# CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

Health Hazard	Category
Skin Irritation	2
Serious Eye Damage	1
Skin Sensitization	1

Signal Word: **WARNING**



Hazard Statement

H302: Harmful if swallowed
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H318: Causes serious eye damage
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

May cause nose, throat and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Causes skin irritation
Severe eye irritation.
If ingested, severe burns of the mouth and throat.
Repeated and/or prolonged exposure to low concentrations of vapors and/or mists may cause sore throat, eye irritation, skin irritation and allergies.

Other Hazards

Keep away from children and animals.

H314 Corrosive Classification: Product level dermal corrosivity testing confirms this product is classified as a skin irritant rather than corrosive. Positive results in a valid and accepted skin corrosion test classifies the mixture as non-corrosive utilizing multiple replicate samples indicating highly reproducible results. As a result, the health hazard and transport classification have been changed to reflect the

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product results: UN Non-Corrosive and not a GHS Category 1.

3. COMPOSITION/INGREDIENT INFORMATION

Ingredients:

<u>Cas#</u>	<u>Chemical Name</u>	<u>%</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
84852-15-3	Nonylphenol	<20	NE	NE
na	Proprietary Amine Prepolymer	>10	NE	NE
140-31-8	Aminoethylpiperazine	<25	NE	NE
9046-10-0	Polyoxypropylenediamine	<25	NE	NE
90-72-2	2,4,6 Tri (dimethylaminomethyl)phenol	<20	10 mg/m3	5 mg/m3

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

4. 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 breathing has stopped or is labored, give assisted respirations. If irritation continues seek medical attention.

Skin Contact: Immediately remove contaminated clothing and shoes. Wash affected area(s) thoroughly with soap and water. SOLVENTS SHOULD NOT BE USED because they carry the irritant into the skin.

Eye Contact: Flush the eyes with gentle and continuous flow of water for at least 15 minutes. If necessary, gently hold eyelids open during the flush. Immediately seek medical attention. If medical attention is not promptly available, continue to irrigate for one hour.

Ingestion: Obtain immediate medical attention. Do not induce vomiting. Should vomiting occur, turn victim's head to the side. Be sure to keep victim's head below hips to avoid aspiration of vomit into the lungs.

5. FIRE FIGHTING MEASURES

Special Fire Fighting Procedures: 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 nozzles 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.

6. ACCIDENTAL RELEASE MEASURES

NE = Not Established

NA = Not Applicable

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Personal Protective Equipment: Splash Goggles, Gloves, Apron, Vapor Respirator
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 OSHA 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.

7. 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). NIOSH/OSHA approved respirators should be provided and worn if ventilation is inadequate.

Storage Requirements: Store in cool/dry location. Do not allow material to freeze, as product may be damaged. Do not handle, store or open near an open flame, sources of heat or sources of ignition.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

HMIS PP, H I Splash Goggles, Gloves, Apron

VENTILATION: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents containment dispersion into the work area controlling it as its source.

RESPIRATORY PROTECTION: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear OSHA/NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.

PROTECTIVE CLOTHING/EQUIPMENT: Wear chemically protective gloves, boots and aprons to prevent prolonged or repeated skin contact. Wear protective goggles and face shield, per OSHA eye and face protection (29 CFR 1910.133).

CONTAMINATED EQUIPMENT: Separate contaminated work clothing from street clothing. Launder before reuse. Remove this material from your work shoes and clean personal protective equipment.

OTHER PRECAUTIONS: Never eat, drink or smoke in work areas.

This material is not listed by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

9. PHYSICAL AND CHEMICAL PROPERTIES

NE = Not Established

NA = Not Applicable

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Appearance:	Amber
Physical State	Liquid
Boiling Point:	ND
Odor:	Amine odor
Freezing/Melting Point:	ND/NE
pH:	ND
Solubility:	Insoluble
Vapor Pressure:	NE
Vapor Density:	(Air = 1) > 1
Spec Grav./Density:	0.97
VOC:	0
Evap Rate:	Slower than Butyl Acetate
Viscosity:	1800 cps
Percent Volatile:	0
Flash Point:	>200° F
Flash Point Method:	Pensky Martens Closed Cup
Burning Rate:	No data available
Autoignition Temp:	No data available

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Inhalation: 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 irritation
Eye Contact: Causes severe eye irritation
Ingestion: If ingested, severe burns of the mouth and throat.
Prolonged exposure: Repeated and/or prolonged exposure to low concentrations of vapors and/or mists may cause sore throat, eye irritation, skin irritation and allergies.
This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater.

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms: May cause long term adverse effects in the aquatic environment.
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 a 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, disposal companies for details prior to any disposal activity. Always follow local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT: Not regulated for transport.

IMDG: Not regulated for transport*. For single or inner packagings greater than 5L: UN 3082 Environmentally Hazardous Substances, Liquid, n.o.s. (nonylphenol), Marine Pollutant, 9 III

IATA: Not regulated for transport* Non-bulk packagings (<119 Gal) are excepted from being classed as a Marine Pollutant per 49 CFR 171.4(c)(2), IATA DGR Special Provision A197.

TDG: Not regulated for transport. This product meets the specifications set forth by Special Provision 99.

*In quantities not to exceed 5kg/5L per single or inner packaging, marine pollutants are not subject to regulation by ground, air, or vessel. See 49 CFR 171.4(c)(2), IATA DGR Special Provision A197, and IMDG Code 2.10.2.7.

15. REGULATORY INFORMATION

TSCA: All chemical substances in this product are either listed on the TSCA Inventory or comply with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards:

Chronic Health Hazard

Acute toxicity (any route of exposure)

Serious eye damage or eye irritation

Respiratory or skin sensitization

Reproductive toxicity

Skin irritation.

SARA 302: This material does not contain any components with a section 302 EHS TPQ.

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313: Phenol, 4-nonyl, branched 84852-15-3 <20.00 %

Clean Air Act

Ozone-Depletion Potential: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

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This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65: This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Rating Scale: 0-4

HMIS II ratings: Health = 2, Fire = 1, Reactivity = 1

HMIS III ratings: Health = 2, Fire = 1, Physical Hazard = 1

NFPA ratings: Health = 2, Fire = 1, Reactivity = 1

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.