

PRODUCT NAME(S): Rhino 1310T NC Epoxy Resin
SECTION 1 – IDENTIFICATION

Manufacturer's Info:
Rhino Linings Corporation
 9747 Businesspark Avenue
 San Diego, CA 92131

Product name: Rhino 1310T NC Epoxy Resin
Chemical Name

Information phone: (858) 450 0441
Emergency contact: CHEMTREC (800) 424 9300

SECTION 2 – HAZARD(S) IDENTIFICATION
OSHA Hazard Communication Standard:

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

GHS-Label Elements: **Signal Word:**
 WARNING

Pictogram(s):



GHS 07

Classification of the substance or mixture:

Hazard Class	Category	Hazard Statement Codes	Hazard Statements
Acute Toxicity, Oral	5	H302	May be harmful if swallowed
Skin corrosion / irritation	1B	H317	May cause an allergic skin reaction
Serious eye damage / Eye irritation	2B	H319	Causes serious eye irritation
Carcinogenicity	5	H335	May cause respiratory irritation
Specific target organ toxicity, repeated exposure	1	H372	Causes damage to lungs and respiratory system, through prolonged or repeated exposure by inhalation

Precautionary Statements:

Prevention:	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P281	Use personal protective equipment as required.
	P260	Do not breathe mist, dusts.
	P270	Do not eat, drink or smoke when using this product.
	P264	Wash exposed area with plenty of water and soap thoroughly after handling.
	P280	Wear protective gloves
Response:	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
	P362	Take off contaminated clothing and wash before reuse.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
Storage:	P308 + P313	IF exposed or concerned: Get medical advice/attention.
	P314	Get medical advice/attention if you feel unwell.
Storage:	P405	Store locked up.
Disposal:	P501	Dispose of contents/container to hazardous or special waste collection point in accordance with local/regional/national/international regulations.

Hazards not otherwise classified: Smoking in combination with silica exposures increases the risk of cancer.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS #	EC #	Concentration, %
Bisphenol A Reaction Product	25085-99-8	500-033-5	77-83
Bisphenol F Resin	9003-36-5	500-0006-8	3-8
2-Ethyl Hexyl Glycidyl Ether	2461-15-6	219-553-6	10-15

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Supersedes: 8/03/2016

Silicon dioxide, chemically prepared	112945-52-5	NL	<2
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SECTION 4 – FIRST-AID MEASURES

Description of First Aid measures:

- Inhalation:** Move to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory problems, seek medical attention.
- Skin:** Wash material off of the skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes immediately and wash them before reuse. Get medical advice/attention if irritation occurs.
- Eye:** Rinse cautiously with water for several minutes, especially under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Do not rub eyes in order to prevent corneal injury. Get medical advice/attention if eye irritation persists.
- Ingestion:** Remove the exposed person to fresh air and keep at rest in a position comfortable for breathing. Remove dentures if any. Rinse mouth thoroughly with water and then give 60 to 240 mL (2 to 8 oz) of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Never induce vomiting or give anything by mouth if the person is unconscious or having convulsions.

Most important symptoms/effects, acute and delayed: See Section 11 for more details.

General advice for First Aid responders: No action should be taken involving any personal risk or without suitable training. If potential for exposure exist refer to Section 8 for specific personal protective equipment. Show this SDS to physician.

Note to physician: Specific antidotes or neutralizers do not exist. Treatment should be supportive and based on the judgment of the physician in response to the reaction of the patient. Recommended medical monitoring for at least 24hours.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: Do Data Available

Specific hazards arising from the chemical: This product is non-flammable and non-combustible. Containers at risk from fire should be cooled with water spray and, if possible, removed from the danger area. Hazardous combustion products: carbon, nitrogen and silica oxides, oxides of metals present in mixture (Section 3).

Special Protective Equipment and Precautions for fire-fighters: Wear NIOSH or OSHA approved self-contained breathing apparatus in positive pressure mode with full face piece and full protective gear. Isolate the scene by removing all persons from the incident area. No action should be taken involving any personal risk or without suitable training.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary and unprotected personnel from entering. Ensure adequate ventilation/exhaust extraction. Use protective equipment as described in Section 8. Do not touch or walk through spilled material; spilled material may cause a slipping hazard.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Inform the relevant authorities if the product has caused environmental pollution. See Section 12 for more details.

Methods and materials for containment and cleaning up: Remove mechanically; cover the remainder with non-combustible absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth). Following absorption, transfer into properly labeled chemical waste containers. If necessary, repeat application of absorbent material until all liquid has been removed from the surface. Wash the spill site with soap and water. Cover container and remove from work to a well ventilated area. Properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, state and local regulations. For major spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or contain and collect with an absorbent material as described in the previous paragraph. For minor spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly with soap and water to remove residual contamination.

Residues from spill cleanup may continue to be regulated under provisions of RCRA and require storage and disposal as hazardous waste. For major spills, see Section 1 for the Emergency contact; for further disposal measures, see Section 13.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling: Do not breathe vapors and mists. Avoid contact with skin and eyes. Wear appropriate respiratory, eye and skin protection. Wash hands thoroughly after handling.

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Conditions for safe storage, including any incompatibilities: Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10 for details), food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed. Protect from freezing. Keep out of the reach of children.

Storage stability: Stable under normal conditions.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200. Employees and consumers should be warned of health risks associated with product use. See Section 8 for additional information on hygiene measures.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters/Occupational exposure limit values: Not available for mixture. Results for components are listed in Section 15.

Appropriate engineering controls: Good local and general ventilation should be sufficient to control worker exposure to airborne contaminants below recommended exposure limits. Local exhaust may be required in some areas.

Personal protective equipment:

Eye/face protection:

When directly handling the product, eye protection is required. Examples of eye protection include safety glasses with side shields or chemical goggles. Contact lenses should not be worn when working with chemicals.

Skin/body protection:

Impervious, waterproof, abrasion and alkali-resistant gloves should be worn always when working with this product. Do not rely on barrier creams in place of impervious gloves. Do not get product inside gloves.

Body should be covered with appropriate clothing (apron, arm covers or full body suit) depending on the task being performed and the risks involved. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH. Remove clothing and protective equipment that becomes saturated with the product and immediately wash exposed areas of the body. Wash contaminated clothing before reuse. Store work clothing separately. Appropriate footwear should be also selected based on the task being performed and the risks involved.

Respiratory protection:

Use properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and assigned protection factor of the selected respirator.

Additional Protective Measures: Educate and train employees in safe handling of this product. Follow all label instructions. As a general hygiene practice, wash hands and face after use. Clean water should always be readily available for emergency skin and eye washing. Use administrative controls such job rotation to supplement engineering controls. Emergency eyewash fountains and safety shower should be in close proximity as a matter of good practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous liquid
Odor:	Slight sweet
Odor threshold:	Not available
pH:	No Data Available
Melting point/ freezing point:	Not available / 0°C
Initial boiling point and boiling range:	100°C
Flash point:	Not applicable
Evaporation rate:	Not available
Flammability (solid, gas):	Not available
Upper/ lower flammability or explosive limits:	Not available
Vapor pressure:	No Data Available
Vapor density:	Not available
Specific Gravity:	1.03 - 1.23
Solubility (water):	Not available
Partition coefficient n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Product will not undergo hazardous polymerization. Based on its structural properties the product is not classified as oxidizing.

Chemical stability: Stable under recommended storage conditions.

Conditions to avoid: Do not freeze. To avoid thermal decomposition, do not overheat.

Incompatible materials: Strong oxidizing agents (strong acids and bases; halogenated compounds), metal alloys, caustics, Oxidizers, and epoxy hardeners in an uncontrolled condition.

- Silica reacts violently with powerful oxidizing agents such as hydrofluoric acid, fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, oxygen difluoride, hydrogen peroxide, acetylene, ammonia yielding possible fire and/or explosions. Silicates dissolve readily in hydrofluoric acid producing a corrosive gas silicon tetrafluoride.

Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. In fire conditions, depending on temperature, air supply and presence of other materials, decomposition products can include, but are not limited to carbon, nitrogen and silica oxides, oxides of metals present in mixture (Section 3).

SECTION 11 – TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin and Eye Contact, Inhalation and Ingestion.

Symptoms of exposure:

Acute toxicity:

Oral: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Dermal: Prolonged or repeated contact may cause skin irritation with local redness.

Inhalation: Not classified.

Skin corrosion / irritation:

May cause skin irritation if not removed accordingly. Adverse symptoms may include irritation and redness.

Serious eye damage / eye irritation:

May cause eye irritation. Adverse symptoms may include tearing, redness and pain. Dispersed solid particles may cause abrasion of the cornea.

Specific target organ toxicity, single exposure:

Not classified. This product contains components that may cause respiratory irritation; however, since they are dispersed in a liquid as opposed to an inhalable fine powder form their effect is neutralized.

Aspiration hazard: Not an aspiration hazard.

Chronic toxicity:

Respiratory and Skin Sensitizer:

This product does not contain component(s) that are reported to be a respiratory sensitizer. Over exposure may be a skin sensitizer in some cases.

Germ cell mutagenicity:

Risk to humans is not expected from exposure to this product.

Carcinogenicity:

No data available.

Reproductive toxicity:

Risk to humans is not expected from exposure to this product.

Specific target organ toxicity, repeated exposure:

No data available on mix.

Medical conditions aggravated by overexposure:

In some cases this could result in skin sensitization.

Toxicity test results: Not available for mixture. Results for components, when available:

Components	Test Results
Propane, 2,2-Bis[p-(2,3-epoxypropoxy)phenyl]-, polymers, CAS #: 25085-99-8	<u>Acute Toxicity</u> Oral Toxicity: >15,000 mg/kg (Rat) Skin corrosion/irritation: 23, 000 mg/kg (rabbit) Serious eye damage/eye irritation: can cause moderate eye irritation. Corneal injury is unlikely <u>Chronic Toxicity</u> Sensitization: Has caused allergic skin reaction in humans. Carcinogenicity: IARC does not list this as carcinogenic.
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin, CAS #: 9003-36-5	<u>Acute toxicity</u> Oral LD50 (Rat): > 2,000 mg/kg; No deaths occurred at this concentration. Inhalation LC50: No data Skin corrosion/irritation (Rabbit): No data available. Skin irritation up to burn if prolonged contact or skin is scratched or cut. Serious eye damage/eye irritation (Rabbit): May cause slight eye or corneal irritation. <u>Chronic Toxicity</u> Sensitization: Has caused allergic skin reactions when tested in guinea pigs. Germ cell mutagenicity: Non relevant data. Carcinogenicity: No relevant data found.
2-Ethyl Hexyl Glycidyl Ether, CAS # 2461-15-6	<u>Acute toxicity</u> Oral LD50 (Rat): 7,800 mg/kg; Inhalation LC50: No data found Skin corrosion/irritation (rabbit): >2,000 mg/kg Serious eye damage/eye irritation: Moderate eye irritation.

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	<u>Chronic Toxicity</u> Sensitization: May cause sensitization by skin contact. Germ cell mutagenicity: This product or a component was mutagenic in a bacterial assay and in a cultured mammalian cell assay. Carcinogenicity: Not listed by IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reactions, Skin disorders and Allergies.
Silicates, CAS # 112945-52-5	<u>Acute toxicity</u> Oral LD50 (Rat): >5000 mg/kg;(OECD Test Guideline 401) Inhalation LC50 (rat): 0/139 mg/l / 4 h (maximum concentration attainable in experiments) Skin corrosion/irritation (rabbit): Not irritating. (literature value) Serious eye damage/eye irritation (rabbit): Not irritating (literature value) <u>Chronic Toxicity</u> Sensitization: Not known Germ cell mutagenicity: No evidence of mutagenic effects. Carcinogenicity: Contains no carcinogenic substances as defined by NTP, IARC and /or OSHA.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability: Not readily biodegradable by OECD criteria.

Bioaccumulative potential: Not known.

Mobility in soil: Not known.

Other adverse effects: Not known.

Ecotoxicity test results: Not available for the mixture. Results for components, where available:

Components	Test Results
Propane, 2,2-Bis[p-(2,3-epoxypropoxy)phenyl]-, polymers, CAS #: 25085-99-8	<u>Aquatic Toxicity</u> Fish LC50 (rainbow trout), 96h: 2 mg/L. Acute toxicity to bacteria IC50, bacteria, 18h, Respiration rates, >42.6 mg/l Acute toxicity to Algae/aquatic plants, 72h, Growth rate inhibition, 11mg/l <u>Ecological Data:</u> Biodegradation: 12%, 28d (OECD test Guideline 302B or equivalent), Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. Bioaccumulation potential: moderate (BCF between 100-300)0 Mobility in soil: Low potential, Koc 500-2000
Reaction product: Bisphenol F-(epichlorohydrin); epoxy resin, CAS #: 9003-36-5	<u>Aquatic Toxicity</u> Fish LC50: for similar materials: Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/l in most sensitive species tested). <u>Ecological Data:</u> Biodegradation: No data available on the product itself. Bioaccumulation potential: No data available on the product itself. Mobility in soil: No data available.
2-Ethyl Hexyl Glycidyl Ether, CAS # 2461-15-6	<u>Aquatic Toxicity</u> Fish LC50: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Acute toxicity to bacteria: No data available Acute toxicity to Algae/aquatic plants: No data available <u>Ecological Data:</u> Biodegradation: Similar material(s): Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Bioaccumulation potential: Potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5) Mobility in soil: No relevant data found.
Silicates, CAS # 112945-52-5	<u>Aquatic Toxicity</u> Fish LC50 (Brachydanio rerio): >10,1000 mg/l / 96 h (OECD 203) Acute toxicity to bacteria: No data found. Acute toxicity to Algae/aquatic plants: No data found <u>Ecological Data:</u> Biodegradation: Methods for determining biodegradability are not applicable to inorganic substances. Bioaccumulation potential: Not to be expected Mobility in soil: No remarkable mobility in soil is to be expected.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product Disposal: The generation of waste should be avoided or minimized wherever possible. If product becomes a waste, it does not meet criteria of hazardous waste as defined in 40 CFR 261, Subpart C and D. Do not discharge into sewer system. Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose waste in compliance with local, state and federal regulations via licensed waste disposal contractor.

Container disposal: Even after emptying, container may retain residues. Containers should be completely emptied and safely stored until appropriately reconditioned or disposed through licensed contractor in accordance with government regulation. This material and its container must be disposed of in a safe way.

SECTION 14 – TRANSPORT INFORMATION

Land transport, U.S. DOT:	Non-regulated
Sea transport, IMDG:	
Proper Shipping Name :	Environmentally Hazardous Substance, Liquid N.O.S. (Epoxy Resin)
UN Number:	UN 3082
Class:	9
Packing group:	III
Marine pollutant:	Epoxy Resin
Transport in bulk	Consult IMO regulations before transporting ocean bulk
According to Annex I or II Of MARPOL 73/78 and the IBC or IGC Code	
Air transport, IATA/ICAO:	
Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
UN number:	UN 3082
Class:	9
Packing group:	III

SECTION 15 – REGULATORY INFORMATION

U.S. Regulations:

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

TSCA Regulations:

All components of this product are listed or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

EPCRA Section 302 (40 CFR Part 355) (Emergency Response Planning, Extremely Hazardous Substance):

No components are subject to the reporting.

EPCRA Section 304 (40 CFR Part 355) (Emergency Release Notification Requirements):

No components are subject to the reporting.

EPCRA Sections 311 & 312 (Hazardous Chemical Inventory Reporting, Hazard Categories):

Acute Health Hazard

EPCRA Section 313 (40 CFR Part 372) (Toxic Chemical Release Inventory Reporting):

No components are subject to the reporting.

CERCLA Sections 102-103 (40 CFR Part 302) (Hazardous Substances Release Notification):

No components are subject to the reporting.

Clean Air Act:

- Ozone Depleting Substances (ODS): This product does not contain and is not manufactured with ozone depleting substances.
- Hazardous Air Pollutants, OSHA, Section 112(b), Table Z-1 and Table Z-3:

Clean Water Act:

- Section 307(a) (Toxic pollutants): No components are listed.
- Section 311(b)(2): Table 116.4A (Hazardous chemicals) / Table 117.3 (RQ): No components are listed.

NFPA rating: Health: 1 Fire: 2 Reactivity: 2 Special: 0

HMIS rating: Health: 2 Flammability: 1 Physical hazard: 0

State Regulations:

California Prop. 65 Components:

To the best of our knowledge, this product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, as levels which would require a warning label under the statute.

Massachusetts New Jersey or Pennsylvania Right to Know Substance Lists:

To the best of our knowledge, this product contains no listed substances known to the State(s) of Massachusetts, New Jersey or Pennsylvania to cause cancer, birth defects or other reproductive harm, as levels which would require a warning label under the statute.

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

To the best of our knowledge, this product does not contain chemical at levels which require reporting under state statute.

Massachusetts Right to Know Extraordinary Hazardous Substance Lists:

To the best of our knowledge, this product does not contain chemical at levels which require reporting under state statute.

Instruction: for regulatory information on components of this mixture, check the appropriate state websites.

International Regulations/Inventories:

No data available.

SECTION 16 – OTHER INFORMATION

LEGEND

GHS	Globally Harmonized System
CAS	Chemical Abstracts Services
EC	European Community
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH	National Institute of Occupational Safety and Health
PEL	Permissible Exposure Limits
TLV	Threshold Limit Value
REL	Recommended Exposure Limit
TWA	Time-Weighted Average
STEL	Short-term exposure limit
HEPA	High Efficiency Particulate Air
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
STOT, SE	Specific Target Organ Toxicity following Single Exposure
STOT, RE	Specific Target Organ Toxicity following Repeated Exposure
DOT	Department of Transportation
IMDG	International maritime dangerous goods code
IATA, ICAO	International Air Transport Association, International Civil Aviation Organization
TSCA	Toxic Substances Control Act
EPCRA	Emergency Planning and Community Right-to-Know Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
RQ	Reportable Quantity
DSL	Domestic Substance List
WHMIS	Workplace Hazardous Materials Information System

Latest revision date: October 12, 2017 – Add GSH label elements and Signal words

Date of the previous revision: August 03, 2017, Add GSH warning

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings Corporation makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.