Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial Preparation Date: 12.28.2016

Revision date: 11.21.2025

Rhino Hybrid 21-60 Resin

SECTION 1: Identification

Product Identifier

Product Name: Rhino Hybrid 21-60 Resin

Product code: 60096

Recommended Use of the Product and Restriction on Use

Relevant Identified Uses: POLYURETHANE SPRAY ELASTOMER SYSTEM - Resin Component

Uses Advised Against: Not determined or not applicable.

Reasons Why Uses Advised Against: Not determined or not applicable.

Manufacturer or Supplier Details

Manufacturer:

United States

Rhino Linings Corporation
1001 Ed Rutherford Road
Greenville, TX 75402
858-450-0441
www.rhinolinings.com

Emergency Telephone Number:

North America

CHEMTREC
800-424-9300 (24/7)

SECTION 2: Hazard(s) Identification

GHS Classification:

Acute toxicity (oral), category 4
Acute toxicity (dermal), category 4
Acute toxicity (inhalation), category 4
Skin irritation, category 2
Serious eye damage, category 1
Skin sensitization, category 1
Germ cell mutagenicity, category 2
Reproductive toxicity, category 1B
Specific target organ toxicity - repeated exposure, category 1
Acute aquatic hazard, category 3
Chronic aquatic hazard, category 3

Label elements

Hazard Pictograms:

Signal Word: Danger

Hazard statements:

H302 Harmful if swallowed
H312 Harmful in contact with skin
H332 Harmful if inhaled
H315 Causes skin irritation
H318 Causes serious eye damage
H317 May cause an allergic skin reaction
H341 Suspected of causing genetic defects.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H402 Harmful to aquatic life
H412 Harmful to aquatic life with long lasting effects

Precautionary Statements:

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P260 Do not breathe dust, fumes, gas, mist, vapors or spray.
P264 Wash any exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P272 Contaminated work clothing must not be allowed out of the workplace
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P273 Avoid release to the environment
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse
P321 Specific treatment (see Sections 4-8 of this SDS and any supplemental information on the product label).
P333+P313 If skin irritation or rash occurs: Get medical advice or attention.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 Immediately call a POISON CENTER.
P308+P313 If exposed or concerned: Get medical advice or attention.
P314 Get medical advice or attention if you feel unwell.
P405 Store locked up
P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Hazards Not Otherwise Classified: None

SECTION 3: Composition/Information on Ingredients

Identification	Name	Weight %
CAS Number: Proprietary	Polyether Polyol	50-70
CAS Number: 9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	5-10
CAS Number: 111-46-6	(2-hydroxyethoxy) ethan-2-ol	1-5

CAS Number: 1318-02-1	Zeolites	1-5
CAS Number: 68479-98-1	Diethylmethylbenzenediamine	1-5
CAS Number: 107-21-1	Ethane-1,2-diol	1-5
CAS Number: 102-60-3	1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	1-5
CAS Number: 280-57-9	1,4-Diazabicyclooctane	0.1-2
CAS Number: 10584-98-2	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	0.1-1

Additional Information:

Specific chemical identity and/or exact percentage (concentration) of each ingredient may be held as confidential business information (CBI). Any ingredient not disclosed in this section may have been determined not to be hazardous to health or the environment, or it may be present at a level below its disclosure threshold.

SECTION 4: First Aid Measures

Description of First Aid Measures

General Notes:

Show this Safety Data Sheet to the doctor in attendance.

After Inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

After Skin Contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

After Eye Contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

After Swallowing:

Not determined or not applicable.

Most Important Symptoms and Effects, Both Acute and Delayed

Acute Symptoms and Effects:

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision.

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis.

Acute inhalation exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Acute oral exposure may lead to dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time).

Delayed Symptoms and Effects:

Exposure may cause genetic defects. Effects are dependent on exposure (dose, concentration, contact time).

Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

Symptoms of exposure may be delayed.

Effects are dependent on exposure (dose, concentration, contact time).

Immediate Medical Attention and Special Treatment

Specific Treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

Notes for the Doctor:

Treat symptomatically.

SECTION 5: Firefighting Measures

Extinguishing Media

Suitable Extinguishing Media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable Extinguishing Media:

Do not use water jet.

Specific Hazards During Fire-Fighting:

Thermal decomposition may produce irritating/toxic fumes/gases.

Special Protective Equipment for Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

Methods and Material for Containment and Cleaning Up:

Harmful if swallowed. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Harmful in contact with skin. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Harmful if inhaled. Put on appropriate personal protective equipment, including a self-contained breathing apparatus (see Section 8) before entering area of spill or leak. Avoid breathing dust, mist, fumes, vapors or spray. Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

Reference to Other Sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and Storage

Precautions for Safe Handling:

Not determined or not applicable.

Conditions for Safe Storage, Including Any Incompatibilities:

Recommended storage temperature: 16 - 32°C (60 - 90°F)

SECTION 8: Exposure Controls/Personal Protection

Only those substances with limit values have been included below.

Occupational Exposure Limit Values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
WEEL	(2-hydroxyethoxy) ethan-2-ol	111-46-6	8-Hour TWA: 10 mg/m³
ACGIH	Zeolites	1318-02-1	8-Hour TWA: 1 mg/m³ (Aluminum metal and insoluble compounds, respirable fraction)
	Ethane-1,2-diol	107-21-1	8-Hour TWA: 25 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 50 ppm (vapor fraction)
	Ethane-1,2-diol	107-21-1	15-Minute STEL: 10 mg/m³ (aerosol only, inhalable fraction)
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	TLV-TWA: 0.1 mg/m³ ([8 hr] Tin, organic compounds, as Sn)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	15-Minute STEL: 0.2 mg/m³ (Tin, organic compounds, as Sn)
United States(California)	Ethane-1,2-diol	107-21-1	Ceiling Limit: 100 mg/m³ (40 ppm)
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	8-Hour TWA: 0.1 mg/m³ (Tin, organic compounds, as Sn)
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	15-Minute STEL: 0.2 mg/m³ (Tin, organic compounds, as Sn)
OSHA	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	PEL: 0.1 mg/m³ (Tin, organic compounds, as Sn)
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	TWA: 0.1 mg/m³ (Tin, organic compounds, as Sn)
NIOSH	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	REL: 0.1 mg/m³ ([for up to a 10-hour workday during a 40-hour workweek] Tin, organic compounds, except cyhexatin, as Sn)
	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	10584-98-2	IDLH: 25 mg/m³ (Tin, organic compounds, as Sn)

Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

Information on Monitoring Procedures:

Not determined or not applicable.

Appropriate Engineering Controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal Protection Equipment

Eye and Face Protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and Body Protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure

limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General Hygienic Measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

SECTION 9: Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance	Yellow Liquid
Odor	Slight ammonia-like
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	>200°C (>392°F)
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	Not determined or not available.
Relative density	1.00-1.05 @ 25°C (77°F)
Solubilities	Slightly soluble
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	>250°C (>482°F)
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

SECTION 10: Stability and Reactivity

Reactivity:

Not reactive under recommended handling and storage conditions.

Chemical Stability:

Stable under recommended handling and storage conditions.

Product is hygroscopic; contamination with moisture will negatively affect product performance. Avoid unintended contact with isocyanates; the reaction will generate heat.

Possibility of Hazardous Reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

Conditions to Avoid:

Unintentional contact with moisture.

Incompatible Materials:

Strong oxidizing agents. Water, alcohols, amines, bases, acids, copper, aluminum and zinc alloys.

Hazardous Decomposition Products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In fire conditions, decomposition depends upon temperature, air supply and the presence of other materials. Can include, but are not limited to carbon and nitrogen oxides, amines, hydrogen cyanide, lower molecular weight organic molecules, aluminum oxides.

SECTION 11: Toxicological Information

Acute Toxicity

Assessment:

Harmful if swallowed.
Harmful in contact with skin.
Harmful if inhaled.

Product Data: No data available.

Substance Data:

Name	Route	Result
Poly(propylene glycol) bis(2-aminopropyl ether)	oral	LD50 Rat: 2885.3 mg/kg
	dermal	LD50 Rabbit: 2979.7 mg/kg
(2-hydroxyethoxy) ethan-2-ol	dermal	LD50 Rabbit: 13300 mg/kg
	inhalation	LC50 Rat: >4.6 mg/L (4 hr [Aerosol])
	Oral ATE	LD50 Rat: 500 mg/kg
Zeolites	inhalation	LC50 Rat: >3.35 mg/L (4 hr [dust])
	oral	LD50 Rat: >5110 mg/kg
	dermal	LD50 Rabbit: >2000 mg/kg
Diethylmethylbenzenediamine	oral	LD50 Rat: 738 mg/kg
	Dermal ATE	LD50 Rabbit: 1100 mg/kg
	inhalation	LC50 Rat: > 0.6125 mg/L (4 hr [aerosol])
Ethane-1,2-diol	Oral ATE	LD50 Rat: 500 mg/kg
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	oral	LD50 Rat: 2890 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
1,4-Diazabicyclooctane	oral	LD50 Rat: 700 mg/kg
	inhalation	LC50 Rat: >10.2 mg/L (4hr [vapor])
	dermal	LD50 Rabbit: >2000 mg/kg
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	oral	LD50 Rat: 396 mg/kg
	dermal	LD50 Rat: 777 mg/kg
	inhalation	LC50 Rat: 0.941 mg/L (4 hr [aerosol])
Polyether Polyol	oral	LD50 Rat: >10,000 mg/kg

Skin Corrosion/Irritation

Assessment:

Causes skin irritation.

Product Data:

No data available.

Substance Data:

Name	Result
Poly(propylene glycol) bis(2-aminopropyl ether)	Causes severe skin burns.
1,4-Diazabicyclooctane	Causes skin irritation.
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Causes skin irritation.

Serious Eye Damage/Irritation

Assessment:

Causes serious eye damage.

Product Data:

No data available.

Substance Data:

Name	Result
Poly(propylene glycol) bis(2-aminopropyl ether)	Causes serious eye damage.
Diethylmethylbenzenediamine	Causes serious eye irritation
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Causes serious eye irritation.
1,4-Diazabicyclooctane	Causes serious eye damage.
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Causes serious eye irritation.

Respiratory or Skin Sensitization

Assessment:

May cause an allergic skin reaction.

Product Data:

No data available.

Substance Data:

Name	Result
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product Data: No data available.

Substance Data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Poly(propylene glycol) bis(2-aminopropyl ether)	Not Applicable
(2-hydroxyethoxy) ethan-2-ol	Not Applicable
Zeolites	Group 3
Ethane-1,2-diol	Not Applicable
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Not Applicable
1,4-Diazabicyclooctane	Not Applicable
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Not Applicable
Polyether Polyol	Not Applicable
Diethylmethylbenzenediamine	Not Applicable

National Toxicology Program (NTP):

Name	Classification
(2-hydroxyethoxy) ethan-2-ol	Not Applicable
Zeolites	Not Applicable
Ethane-1,2-diol	Not Applicable
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Not Applicable
1,4-Diazabicyclooctane	Not Applicable
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Not Applicable
Poly(propylene glycol) bis(2-aminopropyl ether)	Not Applicable
Polyether Polyol	Not Applicable
Diethylmethylbenzenediamine	Not Applicable

OSHA Carcinogens: Not applicable

Germ Cell Mutagenicity

Assessment:

Suspected of causing genetic defects.

Product Data:

No data available.

Substance Data:

Name	Result
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Suspected of causing genetic defects.

Reproductive Toxicity

Assessment:

May damage fertility or the unborn child.

Product Data:

No data available.

Substance Data:

Name	Result
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	May damage fertility. May damage the unborn child.

Specific Target Organ Toxicity (Single Exposure)

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Specific Target Organ Toxicity (Repeated Exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product Data:

No data available.

Substance Data:

Name	Result
Diethylmethylbenzenediamine	May causes damage to organs through prolonged or repeated exposure.
Ethane-1,2-diol	May cause damage to Kidneys through prolonged or repeated oral exposure.
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Causes damage to thymus through prolonged or repeated exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product Data:

No data available.

Substance Data: No data available.

Information on Likely Routes of Exposure:

No data available.

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

No data available.

Other Information:

No data available.

SECTION 12: Ecological Information

Acute (Short-Term) Toxicity

Assessment:

Harmful to aquatic life.

Product Data: No data available.

Substance Data:

Name	Result
Poly(propylene glycol) bis(2-aminopropyl ether)	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 15 mg/L (72 hr [growth rate])
	Aquatic Invertebrates EC50 Daphnia magna: 80 mg/L (48 hr [immobilization])
	Fish LC50 Oncorhynchus mykiss: >15 mg/L (96 hr)
(2-hydroxyethoxy) ethan-2-ol	Fish LC50 Pimephales promelas: 75,222 mg/L (96 hr [mortality])
	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr)
	Aquatic Plants EC50 Raphidocelis subcapitata: > 6500 - < 13000 mg/L (72 hr [growth rate; read-across substance data])
Diethylmethylbenzenediamine	Fish LC50 Pimephales promelas: >106 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: >0.3 mg/L (48 hr [mobility])
	Aquatic Plants ErC50 Algae: 104 mg/L (72 hr [growth rate])
Ethane-1,2-diol	Aquatic Invertebrates EC50 Daphnia magna: > 100 mg/L (48 hr [immobilisation])
	Fish LC50 Pimephales promelas: 53,000 mg/L (96 hr)
1,4-Diazabicyclooctane	Aquatic Plants LC50 Pseudokirchneriella subcapitata: 110 mg/L (72 hr [biomass])
	Aquatic Invertebrates EC50 Daphnia magna: >100 mg/L (48 hr [mobility])
	Fish LC50 Cyprinus carpio: >100 mg/L (96 hr)
	Aquatic Plants EC50 Pseudokirchneriella subcapitata: 180 mg/L (72 hr [growth rate])
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Fish LC50 Danio rerio: 11.7 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 0.035 mg/L (48 hr [mobility])
	Aquatic Plants ErC50 Scenedesmus subspicatus: > 0.646 mg/L (72 hr [growth rate])
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Fish LC50 Danio rerio: >120 mg/L (96 hr)
	Aquatic Plants EC50 Raphidocelis subcapitata: >14.746 mg/L (72 hr [growth rate])
Zeolites	Aquatic Invertebrates EC50 Daphnia magna: > 1000 mg/L (48hr [mobility])
	Aquatic Plants EC50 Desmodesmus subspicatus: > 1000 mg/L (72hr [growth rate])

Chronic (Long-Term) Toxicity

Assessment:

Harmful to aquatic life with long lasting effects.

Product Data: No data available.

Substance Data:

Name	Result
Ethane-1,2-diol	Fish NOEC Menidia peninsulae: > 40 mg/L (28 d [weight and mortality, Read-across substance data])
	Aquatic Invertebrates NOEC Daphnia magna: > 15,000 mg/L (21 d [reproduction])
	Aquatic Plants NOEC Raphidocelis subcapitata: > 100 mg/L (72 hr [growth rate])

Name	Result
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Aquatic Invertebrates NOEC Daphnia magna: ≥12 mg/L (21 d [reproduction])
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Aquatic Invertebrates NOEC Daphnia magna: 0.36 mg/L (21 d [reproduction])
(2-hydroxyethoxy) ethan-2-ol	Aquatic Plants NOEC Raphidocelis subcapitata: > 100 mg/L (72 hr [growth rate])
	Aquatic Invertebrates NOEC Daphnia magna: 7500 - 15000 mg/L (21 d [growth])
Poly(propylene glycol) bis(2-aminopropyl ether)	Aquatic Plants NOEC Skeletonema costatum: 100 mg/L (72 hr [growth rate])
Zeolites	Fish NOEC Pimephales promelas: >= 86.7 mg/L (30d)
	Aquatic Invertebrates NOEC Daphnia magna: 130.8 mg/L (21d [Reproduction])

Persistence and Degradability

Product Data: No data available.

Substance Data:

Name	Result
Poly(propylene glycol) bis(2-aminopropyl ether)	The substance is not readily biodegradable. 0% degradation in water, measured by CO2 evolution, after 28 days.
(2-hydroxyethoxy) ethan-2-ol	The substance is readily biodegradable.102 % degradation in water, measured by DOC removal, after 28 days.
Zeolites	Persistence assessment based on biodegradability is not relevant for inorganic compounds such as this substance.
Ethane-1,2-diol	The substance is readily biodegradable. 90-100% degradation in water, measured by DOC removal, after 10 days.
1,4-Diazabicyclooctane	The substance is not readily biodegradable (7% degradation after 28 days, measured by CO2 evolution).
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	This substance is inherently biodegradable in water (30-40% degradation after 28 days, measured by Oxygen consumption).
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	The substance is not readily biodegradable. 20% degradation in water, measured by DOC removal, after 28 days.

Bioaccumulative Potential

Product Data: No data available.

Substance Data:

Name	Result
Zeolites	Bioaccumulation assessment using a classic BCF assessment is not considered relevant for inorganic compounds such as this substance.
Ethane-1,2-diol	The substance is not expected to bioaccumulate (log Pow: -1.36).
1,4-Diazabicyclooctane	The substance is not expected to significantly accumulate in organisms, BCF (aquatic species): 13

Name	Result
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Accumulation in organisms is not to be expected (anticipated log Kow: <3).
Poly(propylene glycol) bis(2-aminopropyl ether)	The substance is not expected to bioaccumulate (BCF: 3.16 L/kg, basis, whole body w.w., aquatic specie: fish, QSAR substance data).
(2-hydroxyethoxy) ethan-2-ol	The substance is not expected to bioaccumulate (log Kow= -1.98 at 25 °C).
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	The substance is not expected to bioaccumulate (log Pow: -2.08 at 25 °C, QSAR substance data).
Diethylmethylbenzenediamine	The substance is not expected to bioaccumulate (BCF: 3.78 L/kg wet wt, QSAR substance data).

Mobility in Soil

Product Data: No data available.

Substance Data:

Name	Result
Zeolites	Mobility in soil assessment based on KOC/Kd values are not relevant for inorganic compounds such as this substance.
Ethane-1,2-diol	The end point is not applicable because the the substance has a low octanol water partition coefficient and its relevant degradation products decompose rapidly.
1,4-Diazabicyclooctane	The substance is highly mobile or mobile in soil then it has a low potential for adsorption to soil and sediment. [Log Koc: 1.95].
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Based on the low solubility of this substance, it can be predicted that this substance will be very strongly adsorbed to soil.
Poly(propylene glycol) bis(2-aminopropyl ether)	The substance is mobile, therefore, there is low potential for adsorption to soil and sediment (Koc: 52.1 L/kg, QSAR substance data).
(2-hydroxyethoxy) ethan-2-ol	Mobility in soil assessment does not need to be conducted due to low octanol water partition coefficient.
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	The endpoint is not applicable because the substance has a low octanol water partition coefficient.
Diethylmethylbenzenediamine	The substance is mobile, therefore, there is low potential for adsorption to soil and sediment (log Koc: 1.645, QSAR substance data).

Results of PBT and vPvB assessment

Product Data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.

vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance Data:

PBT assessment:

(2-hydroxyethoxy) ethan-2-ol	The substance is not PBT.
Zeolites	PBT assessment does not apply to inorganic compounds such as this substance.
Diethylmethylbenzenediamine	The substance is not PBT.

Ethane-1,2-diol	The substance is not PBT.
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	The substance is not PBT.
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	This substance is not PBT.
Poly(propylene glycol) bis(2-aminopropyl ether)	The substance is not PBT.
1,4-Diazabicyclooctane	The substance is not PBT.

vPvB assessment:

(2-hydroxyethoxy) ethan-2-ol	The substance is not vPvB.
Zeolites	vPvB assessment does not apply to inorganic compounds such as this substance.
Diethylmethylbenzenediamine	The substance is not vPvB.
Ethane-1,2-diol	The substance is not vPvB.
1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	The substance is not vPvB.
2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	This substance is not vPvB.
Poly(propylene glycol) bis(2-aminopropyl ether)	The substance is not vPvB.
1,4-Diazabicyclooctane	The substance is not vPvB.

Other Adverse Effects: No data available.

SECTION 13: Disposal Considerations

Disposal Methods:

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.

Contaminated packages:

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

United States Transportation of Dangerous Goods (49 CFR DOT)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None

Environmental Hazards	None
Special Precautions for User	None

International Maritime Dangerous Goods (IMDG)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN Number	Not regulated
UN Proper Shipping Name	Not regulated
UN Transport Hazard Class(es)	None
Packing Group	None
Environmental Hazards	None
Special Precautions for User	None

SECTION 15: Regulatory Information

United States Regulations

Inventory Listing (TSCA):

111-46-6	(2-hydroxyethoxy) ethan-2-ol	Listed - Active
1318-02-1	Zeolites	Not Listed
107-21-1	Ethane-1,2-diol	Listed - Active
102-60-3	1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Listed - Active
280-57-9	1,4-Diazabicyclooctane	Listed - Active
10584-98-2	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Listed - Active
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Listed - Active
Proprietary	Polyether Polyol	Listed - Active
68479-98-1	Diethylmethylbenzenediamine	Listed - Active

Significant New Use Rule (TSCA Section 5):

111-46-6	(2-hydroxyethoxy) ethan-2-ol	Not Listed

1318-02-1	Zeolites	Not Listed
107-21-1	Ethane-1,2-diol	Not Listed
102-60-3	1,1',1'',1'''-ethylenedinitrilotetrapropan-2-ol	Not Listed
280-57-9	1,4-Diazabicyclooctane	Not Listed
10584-98-2	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Not Listed
9046-10-0	Poly(propylene glycol) bis(2-aminopropyl ether)	Not Listed
Proprietary	Polyether Polyol	Not Listed
68479-98-1	Diethylmethylbenzenediamine	Listed

Export Notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 Extremely Hazardous Substances: None of the ingredients are listed.

SARA Section 313 Toxic Chemicals:

111-46-6	(2-hydroxyethoxy) ethan-2-ol	Listed
107-21-1	Ethane-1,2-diol	Listed

CERCLA:

111-46-6	(2-hydroxyethoxy) ethan-2-ol	Listed	
107-21-1	Ethane-1,2-diol	Listed	5000 lbs

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

107-21-1	Ethane-1,2-diol	Listed

New Jersey Right to Know:

107-21-1	Ethane-1,2-diol	Listed

New York Right to Know:

107-21-1	Ethane-1,2-diol	Listed
280-57-9	1,4-Diazabicyclooctane	Listed
10584-98-2	2-Ethylhexyl 2-[dibutyl-[2-(2-ethylhexoxy)-2-oxoethyl]sulfanylstannyl]sulfanylacetate	Listed

Pennsylvania Right to Know:

111-46-6	(2-hydroxyethoxy) ethan-2-ol	Listed
107-21-1	Ethane-1,2-diol	Listed

California Proposition 65:

⚠ **WARNING:** This product can expose you to Ethane-1,2-diol; which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Additional information: Not determined.

SECTION 16: Other Information

Abbreviations and Acronyms: None

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. Sections 11/12 Disclaimer (Toxicity/Ecotoxicity): This product itself has not been tested. Information given is based on data on the components and the toxicology of similar products. Section 14 (Transport Information): Information provided in Section 14 is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

NFPA: 3-1-0
HMIS: 3*-1-0
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Revision Notes:

Revision Date	Notes
2016-12-28	
2019-03-13	Internal Review
2025-11-21	Internal Review

End of Safety Data Sheet