

PRODUCT NAME(S): Primer 251 Part B

SECTION 1 – IDENTIFICATION

Manufacturer's Info: **Product name:** **Primer 251 Part B**
Rhino Linings Corporation
 9747 Businesspark Avenue
 San Diego, CA 92131

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:** **Pictogram(s):**
 DANGER



GHS 08

Classification of the substance or mixture:

Hazard Class	Category	Hazard Statement Codes	Hazard Statements
Skin corrosion / irritation	3	H316	Causes mild skin irritation
Serious eye damage / Eye irritation	2B	H320	Causes eye irritation
Carcinogenicity	1A	H350	May cause cancer by inhalation
Specific target organ toxicity, repeated exposure	2	H373	May cause damage to kidney, liver, blood and central nervous system through prolonged or repeated exposure May cause damage to lungs/respiratory system through prolonged or repeated exposure by inhalation

Precautionary Statements:

Prevention: P201 Obtain special instruction 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, vapors, spray.
 P264 Wash exposed area with plenty of water and soap thoroughly after handling.

Response: P332 + P313 If skin irritation occurs: Get medical advice/attention.
 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.
 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: Not known.

Note: Negative effects of the components classified as carcinogen are minimized, considering that they are dispersed in liquid. However, precautions should be taken to avoid breathing mists created during application and dust from cutting or grinding of cured product containing these components.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS #	EC #	Concentration, %
Barite	13462-86-7	236-664-5	40 – 60
Polyether Polyol	Trade Secret	Trade Secret	20 – 40
Glycol	Trade Secret	Trade Secret	1 – 5
Zeolites	1318-02-1	930-915-9	1 – 5
Titanium Dioxide	13463-67-7	236-675-5	1 – 5

Crystalline Silica (Quartz)	14808-60-7	238-878-4	0.05 – 1.0
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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. Remove contaminated clothing and shoes and wash them before reuse. Get medical advice/attention if irritation persists.
- 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:** Move to fresh air and keep at rest in a position comfortable for breathing. Remove dentures if any. Rinse mouth thoroughly with water and then drink 60 to 240 mL (2 to 8 oz). Get medical advice/attention if symptoms occur.

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

General advice for First Aid responders: 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 24 hours.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray, alcohol-resistant foam, dry chemical or carbon dioxide fire extinguishers.

Unsuitable extinguishing media: Direct water stream may cause frothing, splattering of burning material and spreading of fire.

Specific hazards arising from the chemical: Material may be ignited only if preheated to high temperatures (such in fire conditions). Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Hazardous combustion products: carbon, barium, sulfur oxides, oxides of metals present in mixture, lower molecular weight organic molecules.

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. Spilled product will cause slippery walking surfaces.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary and unprotected personnel from entering. Ensure adequate ventilation/exhaust extraction. Avoid breathing vapors or mist during clean up. 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. Never return spills to original containers for re-use.

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: Protect chemical from atmospheric moisture. Avoid prolonged exposure to heat and air. Keep away from sources of ignition. Do not reseal if contamination is suspected.

Use adequate ventilation to keep airborne levels below the exposure limits. Do not breathe vapors and mists. Wear respiratory protection if material is heated, mixed, sprayed or used in a confined space. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash hands thoroughly after handling. Hands and/or face should be washed before eating, drinking and smoking and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

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Conditions for safe storage, including any incompatibilities: Store in original or approved alternative container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Protect it against physical damage and moisture. Normal temperature and pressures do not affect the material. Keep liquid away from heat, sparks and flame. Do not cut, drill, grind, weld or perform similar operations on or near containers. Segregate from acids and acid forming substances.

Storage stability: Stable under normal conditions.

Storage temperature: 60 - 90°F (16 – 32°C)

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 liquid product, eye protection is recommended. Examples of eye protection include safety glasses and goggles or full face shield when there is a greater risk of splash. Contact lenses should not be worn when working with chemicals.

Skin/body protection:

Impervious gloves (nitrile butyl rubber, neoprene and PVC) should be worn when working with this product. 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. 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 local or general ventilation to control exposures below applicable exposure limits. When ventilation is inadequate, use either an atmosphere supplying respirator or NIOSH or OSHA approved air-purifying respirator for organic vapors. Respirator must be properly fitted and its selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits 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. Emergency eyewash fountains and safety shower are recommended in close proximity as a matter of good work practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Grey Liquid
Odor:	Mild
Odor threshold:	Not available
pH:	7 – 9
Melting point/ freezing point:	Not available
Initial boiling point and boiling range:	>200°C
Flash point:	>200°C
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not applicable
Upper/ lower flammability or explosive limits:	Not applicable
Vapor pressure:	Negligible
Vapor density:	Not available
Relative density:	Not available
Solubility (water):	Insoluble
Partition coefficient n-octanol/water:	Not available
Auto-ignition temperature:	>250°C
Decomposition temperature:	Not available
Viscosity:	Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Product will not undergo hazardous polymerization. Corrosive effects to metal are not anticipated. Based on its structural properties the product is not classified as oxidizing. Does not form flammable gases in the presence of water.

Chemical stability: Stable under recommended storage conditions. Product is hygroscopic; contamination with moisture will negatively affect product performance. Avoid unintended contact with isocyanates; the reaction will generate heat.

Conditions to avoid: Unintentional contact with moisture, excessive heat, open flame and sparks. Avoid mist formation.

Incompatible materials: Strong oxidizing agents; for barite: Potassium, Phosphorus, Sulfuric Acid and Aluminum. Note: Aluminum in the presence of heat can cause an explosion.

Hazardous decomposition products: Depend upon temperature, air supply and presence of other materials. Can include, but are not limited to carbon, barium, sulfur oxides, oxides of metals present in mixture, lower molecular weight organic molecules.

SECTION 11 – TOXICOLOGICAL INFORMATION

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

Symptoms of exposure:

Acute toxicity:

Oral: Not anticipated, however, adverse symptoms may include abdominal pain, nausea and diarrhea.

Dermal: Not anticipated, however, adverse symptoms may include irritation and redness.

Inhalation: Not anticipated.

Skin corrosion / irritation:

May cause mild skin irritation if not washed off accordingly. Adverse symptoms may include irritation and redness.

Serious eye damage / eye irritation:

May cause mild, temporary eye irritation. Adverse symptoms may include tearing and redness.

Specific target organ toxicity, single exposure:

Not expected.

Aspiration hazard: Not an aspiration hazard.

Chronic toxicity:

Respiratory and Skin Sensitizer:

This product does not contain components that are reported to be a skin or respiratory sensitizer.

Germ cell mutagenicity:

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

Carcinogenicity:

This product contains component reported to be possibly carcinogenic to humans by IARC.

- o Titanium dioxide, CAS #: 13463-67-7: IARC: Group 2B (Possibly Carcinogenic to Humans)
- o Zeolites, CAS #: 1318-02-1: IARC: Group 3 (Not Classifiable as to its Carcinogenicity to Humans)
- o Crystalline Silica, CAS #: 14808-60-7: IARC: Group 1 (Carcinogenic to humans)
 NTP: Known to be a Human Carcinogen (Respirable size)
 ACGIH: Group A2 (Suspected Human Carcinogen)
 NIOSH: Potential occupational carcinogen

Negative effects of the components classified as carcinogen are minimized, considering that they are dispersed in liquid. However, precautions should be taken to avoid breathing mists created during application and dust from cutting or grinding of cured product containing these components.

Reproductive toxicity:

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

Specific target organ toxicity, repeated exposure:

Kidney, liver, blood, central nervous and respiratory system/ lungs.

Medical conditions aggravated by overexposure:

Kidney, liver, blood, central nervous and respiratory system/ lungs disorders if product is handled without adequate protection.

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

Components	Test Results
Barite, CAS #: 13462-86-7	<p><u>Acute Toxicity</u> Oral LD50: If ingested, the presence of soluble barium salts as impurities may cause toxic reactions due to bioaccumulation. Dermal LD50: Not available Inhalation: May cause respiratory tract irritation (shortness of breath). Skin corrosion/irritation (Rabbit): May cause irritation and/or dermatitis. May be harmful if absorbed through skin. Serious eye damage/eye irritation (Rabbit): May cause mechanical eye irritation. STOT, SE: risk to humans is not expected from exposure to this product. Aspiration hazard: No</p> <p><u>Chronic toxicity</u> Sensitization, skin and respiratory: Not sensitizer Germ cell mutagenicity: Risk to humans is not expected from exposure to this product. Carcinogenicity: Not carcinogenic per IARC. However, it contains crystalline silica as an impurity which is known carcinogen. Reproductive toxicity: Risk to humans is not expected from exposure to this product.</p>

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	<p>STOT, RE: Although biologically inert, repeated exposure to barium sulfate may cause barium to accumulate in the body. May cause damage to lungs through prolonged and repeated exposure by inhalation. Prolonged inhalation of dust may cause baritosis, a benign pneumoconiosis. Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis.</p>
<p>Polyether Polyol, CAS #: Trade Secret</p>	<p>Not hazardous.</p>
<p>Glycol, CAS #: Trade Secret</p>	<p><u>Acute Toxicity</u> Oral LD50 (Rat): >5,000 mg/kg; No mortality was observed (OECD Test Guideline 401) Dermal LD50 (Rat): >5,000 mg/kg; No mortality was observed (OECD Test Guideline 402) Inhalation, aerosol, LC50 (Rat), 4hrs: 1-5 mg/L; No mortality was observed (similar to OECD Test Guideline 403) Skin corrosion/irritation (Rabbit): Non-irritating (OECD Test Guideline 404) Serious eye damage/eye irritation (Rabbit): Non-irritating. STOT, SE: risk to humans is not expected from exposure to this product. Aspiration hazard: No.</p> <p><u>Chronic toxicity</u> Sensitization, skin and respiratory: Negative (Guinea pig) Mutagenicity: Not mutagenic in bacteria, mammalian cell culture and test with mammals. Carcinogenicity: Not observed. Reproductive toxicity: Not observed. STOT, RE: Central nervous system, kidney.</p>
<p>Zeolites, CAS #: 1318-02-1</p>	<p><u>Acute Toxicity</u> Oral LD50 (Rat): >5,110 mg/kg (OECD Guideline 401); May cause gastrointestinal tract irritation. Dermal LD50 (Rabbit): Not data available Inhalation LC50 (Rat)(dust/aerosol), 4hrs : >5.3 mg/L. Slightly irritant. Skin corrosion/irritation (Rabbit): Slightly irritant. May cause dehydration. Serious eye damage/eye irritation (Rabbit): Slightly irritant. May cause abrasion or mechanical irritation. STOT, SE: risk to humans is not expected from exposure to this product. Aspiration hazard: No</p> <p><u>Chronic toxicity</u> Sensitization, skin and respiratory: Not sensitizer (Guinea pig maximization test) Germ cell mutagenicity: Risk to humans is not expected from exposure to this product. Carcinogenicity: IARC: Group 3 (Not Classifiable as to its Carcinogenicity to Humans) Reproductive toxicity: No adverse effects in rats and rabbits or their offspring following administration in the drinking water during pregnancy. STOT, RE: Effects on kidney were observed in rats and dogs administered high dose levels in their feed for one month. Effect on blood, chronic pneumonitis and acute bronchopneumonia were observed in dogs. Long-term inhalation by rats and dogs produced inflammation in the lungs associated with accumulation of particulate.</p>
<p>Titanium Dioxide, CAS #: 13463-67-7</p>	<p><u>Acute toxicity</u> Oral LD50 (Rat): >5,000 mg/kg; a very insoluble compound. The studies in several species, including man, show neither significant absorption nor tissue storage following ingestion. Inhalation LC50 (Rat): >6.82 mg/L Skin corrosion/irritation (Rabbit): Slight or no skin irritation. Not dermally absorbed by humans. Serious eye damage/eye irritation (Rabbit): Slight or no eye irritation.</p> <p><u>Chronic Toxicity</u> Sensitization (Mouse): Not sensitizing on laboratory animals. Germ cell mutagenicity: Non genotoxic. Carcinogenicity: IARC: Group 2B: Possibly carcinogenic to humans; No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by NTP, ACGIH and OSHA. Titanium dioxide is a frequently used compound in lung clearance studies, where a biologically inert substance is required, however inhalation of high concentrations of fine or ultrafine titanium dioxide particles has been shown to result in pulmonary inflammation, fibrosis, and lung tumors in rats. The same inhalation effects were not observed in mice and hamsters and may be a rat-specific threshold phenomenon, dependent upon lung overloading at high exposure concentrations and possibly of little relevance to humans. Epidemiological data suggest that there is no carcinogenic effect associated with workplace exposure to titanium dioxide dust. STOT, RE: Inhalation: Lung fibrosis; potential occupational carcinogen.</p>

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. Do not release into natural waters.

Persistence and degradability: Not readily biodegradable by OECD criteria.

Bioaccumulative potential: No significant accumulation in organisms is expected.

Mobility in soil: Not known.

Other adverse effects: Not known.

Components	Test Results
<p>Barite, CAS #: 13462-86-7</p>	<p><u>Aquatic toxicity:</u> Not expected to be harmful to aquatic organisms. Biodegradability: Not readily biodegradable. Bioaccumulative potential: None Mobility in soil: None Other adverse effects: Not expected.</p>
<p>Polyether Polyol, CAS #: Trade Secret</p>	<p>Not hazardous.</p>
<p>Glycol, CAS #: Trade Secret</p>	<p><u>Aquatic toxicity:</u> High probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.</p> <p><u>Acute Toxicity:</u> Fish (fathead minnow), 96hrs: LC50: >40,000 mg/L (OECD Test Guideline 203, static). Product not tested; The statement has been derived from substances/products of a similar structure or composition. Aquatic Invertebrates (Daphnia magna), 48hrs: EC50: >100 mg/L (OECD Test Guideline 202, part 1, static) Aquatic Plants (algae), 72hrs: EC50: >100 mg/L (OECD Test Guideline 201)</p>

	<p>Activated sludge (bacteria), 18hrs: EC10: >1,000 mg/L <u>Chronic toxicity:</u> Other terrestrial, non-mammals, 14days: LD50: >2,000 mg/kg <u>Ecological Data:</u> Biodegradation: Readily biodegradable (OECD Test Guideline 301D) Elimination, aerobic, activated sludge, domestic, 28 days: 80-90% BOD of the ThOD (OECD Test Guideline 301F) DOC reduction, aerobic, microorganisms, industrial, 64days: 20-25 % (OECD Test Guideline 306) Bioaccumulative potential: Does not significantly accumulate in organisms. Mobility in soil: Not expected.</p>
Zeolites, CAS #: 1318-02-1	<p><u>Acute Toxicity:</u> Fish (fathead minnow), 96hrs: LC50: >680 mg/L (EPA 72-1, static). The details of the toxic effect relate to the nominal concentration. The LC50 is higher than the solubility limit. Aquatic invertebrates (Daphnia magna), 24hrs: EC50: 2,808 mg/L (OECD Test Guideline 202, part 1, static) Aquatic plants (Green algae), 96hrs: EC50: >328 mg/L (OECD Test Guideline 201, static). The details of the toxic effect relate to the nominal concentration. Tested above maximum solubility. The product has low solubility in the test medium. An eluate has been tested. Microorganisms (Bacteria), 16hrs: EC50: 950 mg/L (Growth inhibition) (DIN 38412, Part 8). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An eluate has been tested. <u>Chronic toxicity:</u> Fish (fathead minnow), 30days: NOEC: ≥86.7 mg/L (OPP 72-5, EPA-Guideline, Flow through). The statement of the toxic effect relates to the analytically determined concentration. Aquatic invertebrates (Daphnia magna), 21days: NOEC: 32 mg/L (OECD Test Guideline 211, semistatic). The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An eluate has been tested. <u>Ecological Data:</u> Biodegradability: Not readily biodegradable. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants. It cannot be eliminated from water by biological purification processes. Mobility in soil: Transport between environmental compartments: Study scientifically not justified.</p>
Titanium Dioxide, CAS #: 13463-67-7	<p><u>Acute toxicity:</u> Fish LC0 (orfe, freshwater fish), 48h: >1,000 mg/L. <u>Ecological Data:</u> Persistence and degradability: Methods for the determination of biodegradability are not applicable to inorganic substances. Bioaccumulative potential: The product is practically insoluble in water and not biodegradable. Mobility in soil: No data available, PBT and vPvB assessment is not required for inorganic substances. Titanium dioxide is a stable compound that is insoluble in water and therefore would not be expected to be present in drinking water. Based on the lack of absorption as well as no identified toxicological effects of concern in animal testing, there are also no risk concerns for non-target terrestrial organisms resulting from the use of titanium dioxide as an inert ingredient.</p>

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. Empty containers should be completely drained 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: Non-regulated
Air transport, IATA/ICAO: Non-regulated

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, Chronic 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: The following components are listed:

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Substance		Regulatory Limits			Recommended Limits	
		OSHA PEL		Cal/OSHA PEL	NIOSH REL	ACGIH® 2015 TLV®
		mppcf	mg/m ³	8-hour TWA, mg/m ³	Up to 10-hour TWA, mg/m ³	8-hour TWA, mg/m ³
Barium Sulfate, CAS #: 7727-43-7	Total dust	-	15	10 (see PNOR)	10	5 (no asbestos and < 1% crystalline silica)
	Respirable fraction	-	5	5 (see PNOR)	5	-
Titanium Dioxide, CAS #: 13463-67-7	Total dust	-	15	10 (as PNOR)	2.4 mg/m ³ (fine) 0.3 mg/m ³ (ultrafine), Ca See Appendix A & C	10
Carbon Black, CAS #: 1333-86-4		-	3.5	3.5 mg/m ³	3.5 mg/m ³ (without PAHs); when PAHs are present, NIOSH considers carbon black to be a potential occupational carcinogen.	3 mg/m ³ (IHL)
Crystalline Silica (Quartz), CAS #: 14808-60-7	Total dust	-	30 : (%SiO ₂ +2)	0.3	-	-
	Respirable fraction	250 : (%SiO ₂ +5)	10 : (%SiO ₂ +2)	0.1	0.05; Ca See Appendix A	0.025 (for α-quartz & cristobalite)

mppcf - millions of particles per cubic foot; Ca - Potential occupational carcinogens; Appendix A, C and D refers to Appendixes of HAP List, Section 112(b) of Clean Air Act

 NIOSH IDLH: Titanium dioxide, CAS #: 13463-67-7: 5000 mg/m³, Ca
 Carbon Black, CAS #: 1333-86-4 in the presence of PAHs: 1,750 mg/m³ / TWA: 0.1 mg PAH s/m³
 Crystalline Silica (Quartz), CAS #: 14808-60-7: Respirable fraction: 50 mg/m³
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.

State Regulations:

California Prop. 65 Components:

This product contains chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

- Titanium dioxide (airborne, unbound particles of respirable size), CAS #: 13463-67-7
 - causes cancer; Date listed: September 2, 2011
- Silica, Crystalline (airborne, unbound particles of respirable size)
 - causes cancer; Date listed: October 1, 1988
 - California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.
- Carbon Black (airborne, unbound particles of respirable size), CAS #: 1333-86-4
 - causes cancer, Date listed: February 21, 2003

* Some chemicals listed as Hazardous Air Pollutants (HAPs) and California Proposition 65 Carcinogens / Reproductive Toxins are not listed in Section 3 since they are only present as impurities at quantities below 0.1%, not relevant for GHS classification.

NFPA rating: Health: 2 Fire: 1 Reactivity: 1 Special: 0
HMIS rating: Health: 2* Flammability: 1 Physical hazard: 1

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

International Regulations/Inventories:

Canada: All ingredients of this product are listed or are exempt from the DSL.

WHMIS Classification (Controlled Products Regulations): Class D2B: Material causing other toxic effects

WHMIS Label Information:


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
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
COD / BOD	Chemical Oxygen Demand / Biological Oxygen Demand
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
EHS	Extremely Hazardous Substances
DSL	Domestic Substance List
WHMIS	Workplace Hazardous Materials Information System

Latest revision date: August 5, 2016

Date of the previous revision: October 6, 2015 – Preparation of SDS in accordance to the GHS requirements

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.