Rhino Linings

SAFETY DATA SHEET **Part No.: RMR-G**

Date: September 16, 2020

PRODUCT NAME(S): Resurfacer Gray

SECTION 1 – IDENTIFICATION

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

Product name: **Resurfacer Gray**

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:** DANGER

Pictogram(s):

GHS 05 GHS 08 GHS 07

Classification of the substance or mixture:

Hazard Class	Category	Hazard Statement Codes	Hazard Statements
Acute Toxicity, Oral	4	H302	Harmful if swallowed
Acute Toxicity, Dermal	4	H312	Harmful in contact with skin
Skin corrosion / irritation	1	H314	Causes severe skin burns and eye damage
Carcinogenicity	1A	H350	May cause cancer by inhalation
Specific target organ toxicity, single exposure	3	H335	May cause respiratory irritation
Specific target organ toxicity, repeated exposure	1	H372	Causes damage to organs through prolonged or repeated exposure. (Lungs, respiratory system, kidney, liver)

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.
	P271	Use only outdoors or in a well-ventilated area.
	P260	Do not breathe dust.
	P270	Do not eat, drink, or smoke when using this product.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.
	P264	Wash exposed area with plenty of water and soap thoroughly after handling.
Response:	P301 + P330 + P312	**IF SWALLOWED:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.
	P331	Do not induce vomiting.
	P303 + P361 + P353	**IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P363	Wash contaminated clothing before reuse.

	P304 + P340 + P310	**IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
	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 or doctor/ physician.
	P308 + P313	**IF exposed or concerned:** Get medical advice/attention.
Storage:	P403 + P235	Store in a well-ventilated place. Keep cool.
	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, %
Amorphous Silica	7631-86-9	231-545-4	30 – 60
Portland cement	65997-15- 1	Not available	30 – 60
Crystalline silica (Quartz)	14808-60-7	238-878-4	5 – 15
Calcium Sulfate Dihydrate (Gypsum)	13397-24-5	603-783-2	1 – 5
Calcium Carbonate (Limestone)	1317-65-3	215-279-6	1 – 5
Kaolin	1332-58-7	310-194-1	1 – 5

SECTION 4 – FIRST-AID MEASURES

Description of First Aid Measures:

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical help if coughing or other symptoms persist. Inhalation of large amounts of the product requires immediate medical attention. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person should be kept under medical surveillance for 48 hours.

Skin: Heavy exposure to the product requires prompt attention. Quickly and gently brush away excess product. Wash material off of the skin thoroughly with lukewarm, gently flowing water and non-abrasive pH natural soap for at least 15 minutes. Remove contaminated clothing and shoes immediately and wash them before reuse. Seek medical attention for rashes, burns, irritation, dermatitis and prolonged unprotected exposure to wet product.

The product may cause skin burns with little warning. Discomfort or pain cannot be relied upon to alert a person to a serious injury. You may not feel pain or the severity of the burn until hours after the exposure. Chemical burns must be treated promptly by a physician or dermatologist and should be treated as caustic burns. In the event of any complaints or symptoms, avoid further exposure.

Eye: Immediate medical attention required. Chemical burns must be treated promptly by a physician or ophthalmologist.

Immediately flush eyes cautiously with plenty of 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 cornea injury.

Ingestion: Immediate medical attention required. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Remove dentures if any.

If the exposed person is conscious, rinse mouth thoroughly with water and then give 60 to 240 mL (2 to 8 oz) of water to drink. Stop giving water if the exposed person feels sick as vomiting may be dangerous. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Do not induce vomiting unless directed to do so by medical personnel.

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 victim 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. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Recommended medical monitoring for at least 24hours.

SECTION 5 – FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical or carbon dioxide fire extinguishers.
Unsuitable extinguishing media: Do not use water jet or water based fire extinguishers. Do not use halogenated compounds.

Specific hazards arising from the chemical: This product is non-flammable, non-combustible and non-explosive.
Containers at risk from fire should be cooled with water spray and, if possible, removed from the danger area.
Hazardous combustion products: carbon dioxide, carbon monoxide, silica oxides, sulfur oxides, metal oxides.

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. Do not touch or walk through spilled material. Ensure adequate ventilation/exhaust extraction. Avoid breathing dust during clean up. Use protective equipment as described in Section 8.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater, basements or confined areas. 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: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with HEPA filter and place in a designated labeled waste container. Seal the container, and properly dispose of the waste material in accordance with existing federal, state and local regulations.
For major spills: Approach release from upwind. Prevent wind dispersal. Large spills to waterways may be hazardous due to alkalinity of the certain components of the product.

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: Avoid generating and do not breathe dust. Do not rely on your sight to determine if dust is in the air. Respirable crystalline silica dust may be in the air without a visible dust cloud.
Use adequate ventilation and/or dust collection methods to keep airborne levels below the exposure limits. Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Avoid breakage of bagged material or spills of bulk material.

Wear appropriate respiratory, eye and skin protection. Avoid contact with skin and eyes. Wash hands thoroughly after handling. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. 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. Wash or vacuum clothing when becomes dusty.

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood.

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 for details) and food and drink.

Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed. Store bags to avoid accidental tearing, breaking, or bursting. Avoid windblown dust by shielding or covering outdoor stockpiles. Protect chemical from atmospheric moisture.

Storage stability: Stable under normal conditions.
Storage temperature: 60 - 100°F (16 – 38°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.

Participate in training, exposure monitoring, and health surveillance programs to monitor any potential adverse health effects that may be caused by breathing respirable crystalline silica.

The OSHA Hazard Communication Standard, 29 CFR Sections 1910.1200, 1915.1200, 1917.28, 1918.90, 1926.59 and 1928.21, and state and local worker or community “right-to-know” laws and regulations should be strictly followed.
See Section 8 for additional information on hygiene measures.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters/Occupational exposure limit values:

INGREDIENT NAME	EXPOSURE LIMITS
Portland Cement	**ACGIH TLV (United States, 3/2012)** TWA: 1 mg/m³ 8hours. Form: Respirable fraction **NIOSH REL (United States, 6/2009)** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2010)** TWA: 5mg/m³. 8 hours. Form: Respirable fraction TWA: 15 mg/m³. 8 hours. Form: Total dust
Calcium carbonate (Limestone)	**NIOSH REL (United States, 6/2009)** TWA: 5 mg/m³ 10 hours. Form: Respirable fraction TWA: 10 mg/m³ 10 hours. Form: Total **OSHA PEL (United States, 6/2010)** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Crystalline silica (Quartz)	**ACGIH TLV (United States, 3/2012)** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 6/2009)** TWA: 0.05 mg/m³ 10 hours. Form: Respirable dust **OSHA PEL Z-3 (United States, 9/2005)** TWA: 10 mg/m³ divided by % SiO2 + 2: Respirable TWA: 30 mg/m³ divided by % SiO2 + 2: Total
Calcium sulfate (Gypsum)	**ACGIH TLV (United States, 3/2012)** TWA: 10 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 6/2009)** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL Z-1 (United States, 2/2006)** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust
Kaolin	**ACGIH TLV (United States, 3/2012)** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 6/2009)** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 10 mg/m³ 8 hours. Form: Total dust **OSHA PEL Z-1 (United States, 2/2006)** TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust

Appropriate engineering controls: Good local and general ventilation and wet methods 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 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 this product. Dust can get under the lenses and cause abrasion of the cornea.

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 long-sleeved and long-legged clothing to protect the skin from direct contact with the product. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH based on the task being performed and the risks involved.

To reduce foot and ankle exposure, wear impervious boots that are high enough to prevent the product from getting inside. 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.

Respiratory protection:

Use local or general ventilation to control exposures below applicable exposure limits.
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.

The table below can assist in selecting respirators that will reduce personal exposures to below the OSHA PEL. It is part of the NIOSH Respirator Selection Logic, 2004, Chapter III, Table 1, "Particulate Respirators". The full document can be found at www.cdc.gov/niosh/npptl/topics/respirators; the user of this SDS is directed to that site for information concerning respirator selection and use.

The assigned protection factor (APF) is the minimum anticipated level of protection provided by each type of respirator worn in accordance with an adequate respiratory protection program. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m^3 , then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m^3. 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.

APF 1	Type of Respirator (Use only NIOSH-certified respirators)
10	Any air-purifying elastomeric half-mask respirator equipped with appropriate type of particulate filter. [2] Appropriate filtering facepiece respirator. [2,3] Any air-purifying full facepiece respirator equipped with appropriate type of particulate filter. [2] Any negative pressure (demand) supplied-air respirator equipped with a half-mask.
25	Any powered air-purifying respirator equipped with a hood or helmet and a high efficiency (HEPA) filter. Any continuous flow supplied-air respirator equipped with a hood or helmet.
50	Any air-purifying full facepiece respirator equipped with N-100, R-100, or P-100 filter(s). Any powered air-purifying respirator equipped with a tight-fitting facepiece (half or full facepiece) and a high-efficiency filter. Any negative pressure (demand) supplied-air respirator equipped with a full facepiece. Any continuous flow supplied-air respirator equipped with a tight-fitting facepiece (half or full facepiece). Any negative pressure (demand) self-contained respirator equipped with a full facepiece.
1,000	Any pressure-demand supplied-air respirator equipped with a half-mask.

[1.] The protection offered by a given respirator is contingent upon (1) the respirator user adhering to complete program requirements (such as the ones required by OSHA in 29CFR1910.134), (2) the use of NIOSH-certified respirators in their approved configuration, and (3) individual fit testing to rule out those respirators that cannot achieve a good fit on individual workers.
[2.] Appropriate means that the filter medium will provide protection against the particulate in question.
[3.] An APF of 10 can only be achieved if the respirator is qualitatively or quantitatively fit tested on individual workers.

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.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid, powder
Odor:	Odorless
Odor threshold:	Not applicable
pH:	Not available for mixture; Silica: 6-8; Portland cement: >11.5;
Melting point/ freezing point:	Not available for mixture; Silica: 3,050°F (1,677°C);
Initial boiling point and boiling range:	Not available for mixture; Silica: 4,046°F (2,230°C); Portland cement: >1,832°F (1,000°C);
Flash point:	Not applicable. Not flammable. Not combustible.
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not applicable
Upper/ lower flammability or explosive limits:	Not applicable
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Relative density:	Not available for mixture; Silica: 2.60-2.65; Portland cement: 2.3-3.1;
Solubility (water):	Insoluble
Partition coefficient n-octanol/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not applicable

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:

Hazardous Polymerization: Product will not undergo hazardous polymerization.
Corrosion to metals: Corrosive effects to metal are anticipated.
Oxidizing properties: Based on its structural properties the product is not classified as oxidizing.

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

Conditions to avoid: Unintentional contact with moisture, high humidity, generation of dust.
Incompatible materials: Strong oxidizing agents; alcohols, amines, bases, acids, metal alloys.

- 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.
- Portland Cement is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Released toxic gases or vapors will depend on the acid involved. Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Reacts slowly with water forming hydrated compounds, releasing heat and producing a strong alkaline solution until reaction is substantially complete.
- Calcium Sulfate Dihydrate (Gypsum): Aluminum (at high temperatures), diazomethane.
- Calcium Carbonate (Limestone) ignites on contact with fluorine and is incompatible with acids, alum, ammonium salts, and magnesium.

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 dioxide, carbon monoxide, silica oxides, sulfur oxides, metal oxides.

SECTION 11 – TOXICOLOGICAL INFORMATION

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

Symptoms of exposure:

Acute toxicity:

Oral:

Harmful if swallowed. Adverse symptoms may include burns to mouth, throat and stomach, abdominal pain, nausea and diarrhea.

Dermal:

May be harmful in contact with skin. Adverse symptoms may include irritation and redness.

Inhalation:

May cause respiratory tract irritation and coughing.

Skin corrosion / irritation:

May cause skin burns. A more severe response may be expected if skin is abraded (scratched or cut).

Serious eye damage / eye irritation:

May cause serious eye damage. Adverse symptoms may include tearing, redness, pain and in the worst case blindness. Dust may cause abrasion of the cornea.

Specific target organ toxicity, single exposure:

This product contains components that are causing respiratory tract irritation after single exposure.

- Portland Cement, CAS #: 65997-15- 1

Aspiration hazard:

Not classified.

Chronic toxicity:

Respiratory and Skin Sensitizer:

May cause respiratory irritation.

Germ cell mutagenicity:

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

Carcinogenicity:

This product contains components/impurities reported to be carcinogenic to humans.

- 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
- Amorphous Silica, CAS #: 7631-86-9:
  - IARC: Group 3 (Not Classifiable as to its Carcinogenicity to Humans)

Reproductive toxicity:

Not classified.

Specific target organ toxicity, repeated exposure:

Lungs, respiratory system, kidney, liver, eyes, skin.

Hazards by inhalation associated with Crystalline Silica, respirable dust particles <10µ in diameter:

- Silicosis: The prolonged and repeated inhalation of silica dust can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis can exist in several forms: chronic, accelerated, or acute and may lead to disability and death.
- Lung Cancer: Workers with silicosis who smoke are at the greatest risk. Preventing the onset of silicosis will reduce the cancer risk.
- Tuberculosis: If exposed to tuberculosis bacteria, individuals with chronic silicosis are at three time higher risk to develop pulmonary tuberculosis.
- Non-Malignant Respiratory Diseases: Increased incidence of chronic bronchitis, emphysema and small airways disease.
- Autoimmune and Chronic Kidney Diseases: Several studies have reported excess cases of several autoimmune disorders (scleroderma, systemic lupus, rheumatoid arthritis) and kidney diseases (including end stage renal disease) among silica-exposed workers.

Medical conditions aggravated by overexposure:

Lungs disease and respiratory disorders (asthma, bronchitis, emphysema, chronic obstructive pulmonary disease), skin disorders, kidney diseases if product is handled without adequate protection.

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

Components	Test Results
Amorphous Silica CAS #: 7631-86-9	Acute Toxicity Oral LD50 (Rat): 3,160 mg/kg Skin corrosion/irritation: not irritating Serious eye damage/eye irritation: can cause moderate eye irritation and may cause abrasion to the cornea. Chronic toxicity Carcinogenicity: IARC: Group 3 (Not Classifiable as to its Carcinogenicity to Humans) STOT, RE: Inhalation (Rat): Structural or functional change in trachea or bronchi, pneumoconiosis, enzyme inhibition, change in blood or tissue levels, weight loss or decreased weight gain.
Portland Cement CAS #: 65997-15- 1	Acute Toxicity Oral: May cause burns to mouth, throat and stomach. Dermal LD50 (Rabbit): >9,400 mg/kg Inhalation: May cause respiratory irritation. Skin corrosion/irritation: May cause skin irritation. May cause serious burns in presence of moisture. Serious eye damage/eye irritation: Causes serious eye damage. May cause serious burns in presence of moisture. STOT, SE: Category 3; by inhalation and skin contact; effects: respiratory tract irritation, skin irritation Chronic Toxicity Sensitization: May cause respiratory sensitization and severe allergic skin reaction due to the potential presence of trace amounts of hexavalent chromium. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. If sensitized to hexavalent chromium, a severe alergic dermal reaction may occur when subsequently exposed to very low levels. Carcinogenicity: IARC, NTP, OSHA, ACGIH: Not classifiable as a human carcinogen; but contains Chromium Compounds (<0.1%) that are considered to be carcinogen. Reproductive toxicity: contains trace amounts of hexavalent chromium which is reported to cause developmental issues. STOT, RE: category 1; by inhalation; respiratory tract and kidney.
Crystalline Silica (Quartz) CAS #: 14808-60-7	Acute Toxicity Skin corrosion/irritation: not irritating Serious eye damage/eye irritation: can cause moderate eye irritation and may cause abrasion to the cornea. Chronic Toxicity Carcinogenicity: Contains respirable crystalline silica which is classified as a known human carcinogen. STOT, RE: Prolonged inhalation of crystalline silica may result in silicosis, a disabling pulmonary fibrosis characterized by fibrotic changes and nodules in the lungs, a dry cough, shortness of breath, emphysema, decreased chest expansion, and increased susceptibility to tuberculosis. In advanced stages, loss of appetite, pleuritic pain, and total incapacity to work. Advanced silicosis may result in death due to cardiac failure or destruction of lung tissue. The chronic health risks are associated with respirable particles of 3-4 um over protracted periods of time. For routine exposure and for individuals with existing respiratory illness (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) symptoms include shortness of breath, wheezing, cough, sputum production, weight loss, fever. Noted are also effects on liver based on human evidence.
Calcium Sulfate Dihydrate (Gypsum) CAS #:13397-24-5	Under normal conditions of intended use, this material does not pose a risk to health. Acute Toxicity – Low hazard Inhalation: dust can be irritating on mucous membranes of the upper respiratory tract. Skin corrosion/irritation: May cause mild skin irritation. Serious eye damage/eye irritation: May cause eye irritation. Aspiration hazard: No. Chronic Toxicity Sensitization: Not expected to be a sensitizer. Germ cell mutagenicity: no evidence. Carcinogenicity: Not carcinogenic by IARC, NTP, OSHA, ACGIH; not on California 65 list. Reproductive toxicity: no evidence. STOT, RE: May cause irritation to mucous membrane and upper respiratory system; cough, sneezing, discharge.
Calcium Carbonate (Limestone) CAS #: 1317-65-3	Acute toxicity Oral LD50 (Rat): >5,000 mg/kg Skin corrosion/irritation: May cause skin irritation. Serious eye damage/eye irritation: May cause eye irritation. Inhalation: irritation to mucous membrane and respiratory tract; symptoms: cough, sneezing, discharge. Chronic Toxicity STOT, RE: Inhalation (Rat): causes damage to lungs, liver, kidney, ureter, and bladder.

Kaolin (Hydrated Aluminum Silicate) CAS #: 1332-58-7	Acute Toxicity Skin corrosion/irritation: May cause skin irritation. Serious eye damage/eye irritation: May cause eye irritation. When introduced directly into trachea or pleural cavity has acute effect on lungs, respiratory system, brain (changes in cerebral spinal fluid, other degenerative changes), and immune system. Chronic Toxicity Carcinogenicity: IARC: Not carcinogenic to humans. STOT, RE: Causes chronic pulmonary fibrosis, stomach granuloma.

The products in question have been evaluated against the Hazardous Products Regulations (WHMIS 2015) and no additional classifications, ingredient disclosure or exposure limits are required for those regulations.

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: No significant accumulation in organisms is expected.

Mobility in soil: Not expected.
Other adverse effects: Not known.

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

Components	Test Results
Crystalline Silica (Quartz) CAS #: 14808-60-7	Not known to be ecotoxic; no data suggests that is toxic to birds, fish, invertebrates, microorganisms or plants.
Calcium Sulfate Dihydrate (Gypsum) CAS #:13397-24-5	Not classified as environmentally hazardous; However, this does not exclude harmful or damaging effect on the environment in the case of large or frequent spills. Fish: LC50 (Fathead minnow), 96hrs: >1970 mg/L. Biodegradability: Not applicable for the salt of inorganic compounds. Bioaccumulation: not expected. Mobility in Soil: a low potential for adsorption to soil; however, it dissolves in presence of water.
Calcium Carbonate (Limestone) CAS #: 1317-65-3	Acute toxicity Fish LC50 (Rainbow Trout), 96hrs: >10,000 mg/L Aquatic invertebrates EC50 (Daphnia magna), 48hrs: >1,000 mg/L Aquatic plants EC50 (Algae), 72hrs: >200 mg/L In solid state, this mineral is a major part of the rocks of earth's surface and is not biodegradable. Negative effect on environment should be therefore excluded. It is dissolved in a natural state and indispensable part of natural waters. Concentrated suspensions of minerals in natural waters may have an unfavorable effect on water organisms.

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: Non-regulated

Air transport, IATA/ICAO: Non-regulated

SECTION 15 – REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

U.S. Toxic Substances Control Act:

None present or none present in regulated quantities.

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:

None present or none present in regulated quantities.

SARA Section 311/312 Hazard Categories:

Refer to hazard classification information in Section 2.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:

None present or none present in regulated quantities.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:

None present or none present in regulated quantities.

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey, Pennsylvania or Rhode Island Right to Know Substance Lists:

- Portland cement – CAS# 65997-15-1
- Calcium Sulfate Dihydrate (Gypsum) – CAS # 13397-24-5
- Calcium Carbonate (Limestone) – CAS # 1317-65-3

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

None present or none present in regulated quantities.

California Prop. 65 Components:

WARNING: This product can expose you to chemicals including Crystalline silica (quartz), which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

NFPA Hazard Rating:

HEALTH	FIRE	INSTABILITY	SPECIFIC
2	1	0	
0 = Normal 1 = Slight 2 = Hazardous 3 = Extreme Danger 4 = Deadly	(Flash Points) 0 = Will not burn 1 = Above 200°F 2 = Below 200°F 3 = Below 100°F 4 = Below 73°F	0 = Stable 1 = Unstable if Heated 2 = Violent Chemical Change 3 = Shock and Heat May Detonate 4 = May Detonate	ACID (Acid) ALK (Alkaline) COR (Corrosive) OXY (Oxidizer) ~~W~~ (Use No Water)

HMIS Hazard Rating:

HEALTH	FLAMMABILITY	REACTIVITY	PROTECTIVE EQUIPMENT
2	1	0	X
0 = Normal 1 = Slight 2 = Hazardous 3 = Extreme Danger 4 = Deadly			X = Ask your Supervisor or Safety Specialist for handling instructions

Canada regulations/legislation:
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

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
MAK	Maximale Arbeitsplatz-Konzentration (maximum workplace concentration)
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
TQ	Threshold Quantity
TPQ	Threshold Planning Quantity
EHS	Extremely Hazardous Substances
DSL	Domestic Substance List
WHMIS	Workplace Hazardous Materials Information System

Latest revision date: September 16, 2020 – Internal Review
Date of the previous revision: August 17, 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.