

**PRODUCT NAME(S): Slip Guard Granules**

**SECTION 1 – IDENTIFICATION**

**Manufacturer's Info:** **Product name:** Slip Guard Granules  
**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:**  
 DANGER

**Pictogram(s):**



GHS 08



GHS 07

**Classification of the substance or mixture:**

<u>Hazard Class</u>	<u>Category</u>	<u>Hazard Statement Codes</u>	<u>Hazard Statements</u>
Specific target organ toxicity, single exposure	3	H335	May cause respiratory irritation
Specific target organ toxicity, repeated exposure	1	H372	Causes damage to lungs through prolonged or repeated exposure by inhalation

**Precautionary Statements:**

<b>Prevention:</b>	P260 P270 P271 P264	Do not breathe dusts. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wash exposed area with plenty of water and soap thoroughly after handling.
<b>Response:</b>	P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Storage:</b>	P403 + P233 P405	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal:</b>	P501	Dispose of contents/container to hazardous or special waste collection point in accordance with local/regional/national/international regulations.

**Hazards not otherwise classified:** Combustible dust.

**SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Components</u>	<u>CAS #</u>	<u>EC #</u>	<u>Concentration, %</u>
Aluminum oxide	1344-28-1	215-691-6	90 – 100

**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 develops or persists.

**Eye:** Immediately rinse 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 develop or 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.

**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:** 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:** Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media:** Do not use water jet.

**Specific hazards arising from the chemical:** Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. 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. During fire, gases hazardous to health may be formed.

**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.

Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

#### 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. Use approved industrial vacuum cleaner for removal. Do not use compressed air for cleaning purposes. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Properly dispose of the waste material in accordance with existing federal, state and local regulations.

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. Use adequate ventilation and dust collection methods to keep airborne levels below the exposure limits. Maintain and test ventilation and dust collection equipment. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Take precautionary measures against static discharges. 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. 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.

**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. Use appropriate containment to avoid environmental contamination.

**Storage stability:** Stable under normal conditions.

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

#### SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control Parameters/Occupational exposure limit values:** Results are listed in Section 15.

**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 liquid product, eye protection is required. Examples of eye protection include safety glasses and goggles. Contact lenses should not be worn when working with chemicals.

**Skin/body protection:**

Impervious gloves should be worn when working with this product. Do not rely on barrier creams in place of impervious gloves. Do not get product inside gloves.

Body should be covered with appropriate clothing (apron, arm covers or full body suit) depending on the task being performed and the risks involved. Appropriate footwear should be also selected based on the task being performed and the risks involved. Wash contaminated clothing when becomes dusty.

**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.

**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**

<b>Appearance:</b>	White Powder
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not available
<b>pH:</b>	Not applicable
<b>Melting point/ freezing point:</b>	3,632°F (2,000°C)
<b>Initial boiling point and boiling range:</b>	5,396°F (2,980°C)
<b>Flash point:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable
<b>Flammability (solid, gas):</b>	May form combustible dust concentrations in air
<b>Upper/ lower flammability or explosive limits:</b>	Not applicable
<b>Vapor pressure:</b>	< 0.01 kPa (25 °C)-estimate
<b>Vapor density:</b>	Not available
<b>Relative density:</b>	4.0
<b>Solubility (water):</b>	Insoluble
<b>Partition coefficient n-octanol/water:</b>	Not applicable
<b>Auto-ignition temperature:</b>	Not available
<b>Decomposition temperature:</b>	Not available
<b>Viscosity:</b>	Not applicable

**SECTION 10 – STABILITY AND REACTIVITY**

**Reactivity:** Product will not undergo hazardous polymerization. No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable under recommended storage conditions.

**Conditions to avoid:** Generation of dust, excessive heat, open flame and sparks.

**Incompatible materials:** Strong oxidizing agents; Chlorinated compounds. Ethylene Oxide.

**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, various hazardous decomposition products may be formed.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

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

**Symptoms of exposure:**
**Acute toxicity:**

**Oral:** May cause irritation of the gastrointestinal tract.

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

**Inhalation:** May cause irritation to the respiratory system. Adverse symptoms coughing and difficulties with breathing.

Note: Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain.

**Skin corrosion / irritation:**

May cause temporary skin irritation. Adverse symptoms may include redness.

**Serious eye damage / eye irritation:**

May cause temporary eye irritation. Adverse symptoms may include tearing and redness. Dust may cause abrasion of the cornea.

**Specific target organ toxicity, single exposure:**

May cause respiratory irritation.

- Aluminum oxide, CAS #: 1344-28-1: STOT, SE: Category 3

**Aspiration hazard:** Not an aspiration hazard.

**Chronic toxicity:**
**Respiratory and Skin Sensitizer:**

This product is not 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 is not considered to be a carcinogen by IARC, NTP, OSHA and ACGIH.

**Reproductive toxicity:**

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

**Specific target organ toxicity, repeated exposure:**

Causes damage to lungs through prolonged or repeated exposure by inhalation.

- Aluminum oxide, CAS #: 1344-28-1: STOT, RE: Category 1

**Medical conditions aggravated by overexposure:**

Lungs damage if product is handled without adequate protection.

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

Components	Test Results
Aluminum oxide, CAS #: 1344-28-1:	<u>Acute toxicity:</u> Oral (Rat): LC50: > 10,000 mg/kg. Inhalation (Rat), 4hrs: LC50: > 2.6 mg/L. (dust) Skin Irritation (Rabbit), 24hrs: May cause temporary skin irritation. Eye Irritation (Rabbit): May cause temporary eye irritation. STOT, SE: Category 3. May cause respiratory irritation. Aspiration hazard: No. <u>Chronic Toxicity:</u> Skin Sensitization: Not a sensitizer. Intradermal injection. (Guinea pig). No skin allergy was observed. Germ cell mutagenicity: No mutagenic components identified. Carcinogenicity: This product is not considered to be a carcinogen by IARC, NTP, OSHA and ACGIH. Reproductive toxicity: No components toxic to reproduction. STOT, RE: Category 1. Causes damage to lungs through prolonged or repeated exposure by inhalation.

**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 known.

**Bioaccumulative potential:** Does not bioaccumulate.

**Mobility in soil:** Not known.

**Other adverse effects:** Not known.

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

Components	Test Results
Aluminum oxide, CAS #: 1344-28-1:	<u>Acute toxicity:</u> Fish (Brown trout), 96hrs: LC50: >100 mg/L. No effect up to the limit of solubility. Aquatic invertebrates (Daphnia magna), 48hrs: EC50: >100 mg/L. No effect up to the limit of solubility. Aquatic plants (microalgae), 72hrs: EC50: >100 mg/L. No effect up to the limit of solubility. <u>Ecological Data:</u> Persistence and degradability: The methods for determining biodegradability are not applicable to inorganic substances. Bioaccumulative potential: Does not bioaccumulate. Mobility in soil: No data available

**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/CAO:** 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):

The following component is subject to the reporting:

- Aluminum Oxide (fibrous form), CAS #: 1344-28-1: De Minimis: 1%

**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 Z-3:

Substance		Regulatory Limits			Recommended Limits	
		OSHA PEL		Cal/OSHA PEL	NIOSH REL	ACGIH® 2015 TLV®
		mppcf	mg/m <sup>3</sup>	(as of 4/26/13) 8-hour TWA, mg/m <sup>3</sup>	(as of 4/26/13) Up to 10-hour TWA, mg/m <sup>3</sup>	
Aluminum oxide, CAS #: 1344-28-1:	Total dust	-	15	10	-	-
	Respirable fraction	-	5	5	-	1

mppcf - millions of particles per cubic foot

**Clean Water Act:**

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

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

**HMIS rating:** Health: 2\* Flammability: 3 Physical hazard: 0

**State Regulations:**

California Prop. 65 Components:

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

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

**International Regulations/Inventories:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory

**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
PACs / PAH	Polycyclic Aromatic Compounds / Polycyclic Aromatic Hydrocarbon Content
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:** March 17, 2016 – Preparation of SDS in accordance to the GHS requirements

**Date of the previous revision:** September 6, 2011

**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.