

MATERIAL SAFETY DATA SHEET



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Product Safety & Regulatory Affairs
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TRANSPORTATION EMERGENCY
CALL CHEMTREC: (800) 424-9300
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NON-TRANSPORTATION
LANXESS Emergency Phone: (800) 410-3063
LANXESS Information Phone: (800) LANXESS

1. Product and Company Identification

Product Name: CARIBOU BROWN RP
Material Number: 3746414
Chemical Family: Pigmented Limestone

2. Hazards Identification

Emergency Overview

WARNING! Color: Brown **Form:** Solid Powder **Odor:** Odorless.
May cause respiratory tract irritation. May cause skin irritation. Causes eye irritation.
May cause lung damage. Contains material which can cause cancer.

Potential Health Effects

Primary Routes of Entry: Inhalation, Skin Contact, Eye Contact, Ingestion

Medical Conditions Aggravated by Exposure: Respiratory disorders, Eye disorders, Skin disorders

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

For Product: CARIBOU BROWN RP

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

Chronic Inhalation

For Product: CARIBOU BROWN RP

Prolonged inhalation of amorphous silica may produce x-ray changes in the lungs without disability.

Skin

Acute Skin

For Product: CARIBOU BROWN RP

May cause irritation with symptoms of reddening and itching. Not expected to be a skin sensitizer.

Eye

Acute Eye

For Product: **CARIBOU BROWN RP**

Causes irritation with symptoms of reddening, tearing, stinging, and swelling.

Ingestion

Acute Ingestion

For Product: **CARIBOU BROWN RP**

Not expected to be harmful if swallowed.

General Effects of Exposure

Acute Effects of Exposure

For Product: **CARIBOU BROWN RP**

Exposure to Silica, Quartz can cause a very serious lung disease called Silicosis with cough, shortness of breath, and changes in chest x-ray. The earliest symptoms of silicosis may include: Shortness of breath, coughing, wheezing, fatigue, chest pain, loss of appetite and fever.

Chronic Effects of Exposure

For Product: **CARIBOU BROWN RP**

Excessive exposure to airborne crystalline silica can cause fibrotic lung damage, with scarring of the lungs with cough and shortness of breath. This is called "Silicosis". This is generally a slowly developing fibrotic disease as symptoms are usually delayed for 10 years or more. Symptoms are dyspnea, chest pain, breathlessness, and cough. The chronic lung scarring developed from the silica dust causes a progressive massive fibrosis. This may lead to increased susceptibility to tuberculosis.

Other Effects of Exposure

For Product: **CARIBOU BROWN RP**

Prolonged inhalation (6 to 10 years) of iron oxide fume has been reported to produce changes in lung x-rays of exposed individuals. This condition, siderosis, is considered to be a benign pneumoconiosis that exhibits no adverse health effects. Siderosis has been observed among occupations such as arc-welders where iron oxide fumes are present. To the best of our knowledge, this condition has not been observed after prolonged exposure to iron oxide pigments.

Carcinogenicity:

Crystalline Quartz Silica

NTP - Hazard Designation: Known carcinogen.

IARC - Overall evaluation: 1 Human carcinogen.

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Limestone	1317-65-3
5 - 10%	Iron (III) Oxide	1309-37-1
1 - 5%	Amorphous Silica	7631-86-9
0.1 - 1%	Crystalline Quartz Silica	14808-60-7

4. First Aid Measures

Eye Contact

In case of contact, flush eyes with plenty of water for at least 15 minutes. Use fingers to ensure that eyelids

are separated and that the eye is being irrigated. Call a physician immediately.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

Ingestion

Get medical attention.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Material is not combustible. Use extinguishing media suitable for other combustible materials in the area.

Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

6. Accidental release measures

Spill and Leak Procedures

Cleanup personnel must use appropriate personal protective equipment. Remove mechanically by a method that minimizes the generation of airborne dust (vacuum cleaner, wet mopping, etc.) Collect and place in appropriately marked sealable containers for disposal.

7. Handling and Storage

Storage Period

Not Established

Handling/Storage Precautions

Avoid breathing dust. Avoid contact with skin or clothing. Avoid contact with eyes. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Further Info on Storage Conditions

Avoid acidic conditions. Minimize dust generation and accumulation.

8. Exposure Controls / Personal Protection

Limestone (1317-65-3)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 5 mg/m³ (Respirable fraction.)
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m³ (Total dust.)
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 5 mg/m³ (Respirable fraction.)
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m³ (Total dust.)

Iron (III) Oxide (1309-37-1)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 10 mg/m³ (Fume.)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m³ (Respirable fraction.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Amorphous Silica (7631-86-9)

US. OSHA Table Z-3 (29 CFR 1910.1000)
Time Weighted Average (TWA): 20 millions of particles per cubic foot of air
US. OSHA Table Z-3 (29 CFR 1910.1000)
Time Weighted Average (TWA): 0.8 mg/m³ The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.

Crystalline Quartz Silica (14808-60-7)

US. OSHA Table Z-3 (29 CFR 1910.1000)
Time Weighted Average (TWA): 2.4 millions of particles per cubic foot of air (Respirable.)The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
US. OSHA Table Z-3 (29 CFR 1910.1000)
Time Weighted Average (TWA): 0.1 mg/m³ (Respirable.)The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
US. OSHA Table Z-3 (29 CFR 1910.1000)
Time Weighted Average (TWA): 0.3 mg/m³ (Total dust.)The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 0.025 mg/m³ (Respirable fraction.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A2 Suspected human carcinogen.

Industrial Hygiene/Ventilation Measures

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines.

Respiratory Protection

The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline., NIOSH approved, air-purifying particulate respirator with P-100 filters., When respirators are in use, an OSHA compliant respirator program is required (29 CFR 1910.134). Airborne concentrations must not exceed the respirator's Assigned Protection Factor multiplied by the appropriate standard/guideline.

Hand Protection

gloves

Eye Protection

Chemical safety goggles or safety glasses with side-shields.

Skin and body protection

Wear cloth work clothing including long pants and long-sleeved shirts.

Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available.

9. Physical and chemical properties

Form:	Solid
Appearance:	Powder
Color:	Brown
Odor:	Odorless
Melting Point:	Not Established
Boiling Point/Range:	Not Established
Flash Point:	Not Applicable
Lower Explosion Limit:	Not Established
Upper Explosion Limit:	Not Established
Vapor Pressure:	Not Applicable
Specific Gravity:	Not Established
Solubility in Water:	Very low solubility
Bulk Density:	Not Established

10. Stability and Reactivity**Hazardous Reactions**

Hazardous polymerization does not occur.

Stability

Stable

Materials to avoid

Acids

Conditions to avoid

None known.

Hazardous decomposition products

None known.

11. Toxicological Information**Toxicity Data for Limestone****Acute Oral Toxicity**

LD50: 6,450 mg/kg (Rat)

Skin Irritation

rabbit, Draize, Exposure Time: 24 hrs, Moderately irritating

Eye Irritation

rabbit, Draize, Exposure Time: 24 hrs, Severely irritating

Toxicity Data for C.I. Pigment Black 11**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

Skin Irritation

rabbit, Acute Dermal Irritation, Non-irritating

Eye Irritation

rabbit, Acute Eye Irritation Study, Non-irritating

Sensitization

dermal: non-sensitizer (Guinea pig)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Toxicity Data for Iron (III) Oxide**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

Acute dermal toxicity

LD50: 5,500 mg/kg (Rat)

Skin Irritation

rabbit, Acute Dermal Irritation, Exposure Time: 24 hrs, Non-irritating

Eye Irritation

rabbit, Acute Eye Irritation Study, Non-irritating

Toxicity Data for C.I. Pigment Yellow 42**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Non-irritating

Carcinogenicity

Rat, Male/Female, intraperitoneal, 8 w,
ambiguous

Toxicity Data for Amorphous Silica**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

Acute Inhalation Toxicity

LC50: > 2.2 mg/l, 1 hrs (Rat)

Acute dermal toxicity

LD50: > 5,000 mg/kg (rabbit)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Non-irritating

Sensitization

dermal: non-sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Repeated Dose Toxicity

90 Days, inhalation: NOAEL: < 0.001 mg/l, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Cytogenetic assay: negative (Rat)

Carcinogenicity

Rat, Male/Female, oral, 2 Years, daily

negative

Toxicity Data for Crystalline Quartz Silica**Mutagenicity**

Genetic Toxicity in Vitro:

Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic

Activation: with/without)

Genetic Toxicity in Vivo:

Sister Chromatid Exchange: ambiguous (hamster)

Carcinogenicity

rat, Male/Female, inhalation, 2 years, 6 hrs/day 5 days/week

positive

12. Ecological Information**Ecological Data for Limestone****Biodegradation**

Not readily biodegradable.

Acute and Prolonged Toxicity to Fish

LC50: 56,000 mg/l (Mosquitofish (Gambusia affinis), 48 hrs)

Ecological Data for C.I. Pigment Black 11**Acute and Prolonged Toxicity to Fish**

LC0: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

Toxicity to Microorganisms

EC0: > 1,000 mg/l, (Pseudomonas fluorescens, 24 hrs)

Ecological Data for Iron (III) Oxide**Acute and Prolonged Toxicity to Fish**

LC0: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 hrs)

Toxicity to Microorganisms

EC0: > 5,000 mg/l, (Pseudomonas fluorescens, 24 hrs)

Toxicity Other Non-Mammal Terrestrial Species

No Harmful effects

Ecological Data for C.I. Pigment Yellow 42**Acute and Prolonged Toxicity to Fish**

EC50: > 1,000 mg/l (Golden orfe (Leuciscus idus), 48 h)

Toxicity to Microorganisms

> 10,000 mg/l, (Pseudomonas putida)

Ecological Data for Amorphous Silica**Biodegradation**

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulation

Not expected to bio-accumulate.

Acute and Prolonged Toxicity to Fish

LC50: 5,000 mg/l (Zebra fish (Brachydanio rerio), 96 hrs)

Calculated value

Acute Toxicity to Aquatic Invertebrates

EC0: 10,000 mg/l (Water flea (Daphnia magna), 24 hrs)

EC50: 7,600 mg/l (Ceriodaphnia sp, 48 hrs)

Calculated value

Toxicity to Aquatic Plants

EC50: 440 mg/l, End Point: growth (Green algae (Selenastrum capricornutum), 72 hrs)

Toxicity to Microorganisms

EC50: 8,700 mg/l, (Photobacterium phosphoreum, 15 min)

13. Disposal considerations**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions

Do not reuse empty container. Recondition or dispose of empty container in accordance with governmental regulations. Label precautions also apply to this container when empty.

14. Transportation information**Land transport (DOT)**

Non-Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO/IATA)

Non-Regulated

15. Regulatory Information

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

US. Toxic Substances Control Act: Listed on the TSCA Inventory.

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

Components

None

SARA Section 311/312 Hazard Categories:

Acute Health Hazard, Chronic Health Hazard

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

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

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

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

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 MSDS 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 or Pennsylvania Right to Know Substance Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Limestone	1317-65-3
>=1%	C.I. Pigment Black 11	1317-61-9
5 - 10%	Iron (III) Oxide	1309-37-1
>=1%	C.I. Pigment Yellow 42	20344-49-4
1 - 5%	Amorphous Silica	7631-86-9

MA Right to Know Extraordinarily Hazardous Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
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0.1 - 1%

Crystalline Quartz Silica

14808-60-7

California Prop. 65:

Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.

Weight %

Components

CAS-No.

0.1 - 1%

Crystalline Quartz Silica

14808-60-7

16. Other Information

NFPA 704M Rating

Health	2
Flammability	0
Reactivity	0
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

HMIS Rating

Health	2*
Flammability	0
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

LANXESS Corporation's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by LANXESS Corporation as a customer service.

Contact Person: Product Safety Department
Telephone: (800) LANXESS
MSDS Number: 000000002842
Version Date: 04/19/2006
Report Version: 3.9

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