

MATERIAL SAFETY DATA SHEET



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Product Safety & Regulatory Affairs
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TRANSPORTATION EMERGENCY
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NON-TRANSPORTATION
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LANXESS Information Phone: (800) LANXESS

1. Product and Company Identification

Product Name: DESERT BUFF CH
Material Number: 3746074
Chemical Family: Pigmented Portland Cement/Silica Mixture

2. Hazards Identification

Emergency Overview

WARNING! **Color:** Light, Tan **Form:** solid Powder **Odor:** Odorless.
Causes respiratory tract irritation. Causes 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: DESERT BUFF CH

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

For Component: Crystalline Quartz Silica

May be harmful by inhalation. May cause mechanical irritation.

For Component: Iron (III) Oxide

May cause mechanical irritation.

For Component: Calcium sulfate

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

Skin

Acute Skin

For Product: DESERT BUFF CH

Causes irritation with symptoms of reddening, itching, and swelling. Not expected to be a skin sensitizer.

For Component: Crystalline Quartz Silica

May cause mechanical irritation.

For Component: Portland Cement

Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. Not expected to be a skin sensitizer.

For Component: Iron (III) Oxide

May cause mechanical irritation.

For Component: Titanium dioxide (Rutile)

Not expected to be irritating.

For Component: Calcium sulfate

May cause irritation with symptoms of reddening and itching.

Chronic Skin

For Product: DESERT BUFF CH

Prolonged or repeated skin contact may cause dermatitis with symptoms of red, itchy, dry skin.

Eye

Acute Eye

For Product: DESERT BUFF CH

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

For Component: Crystalline Quartz Silica

May cause mechanical irritation.

For Component: Portland Cement

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

For Component: Iron (III) Oxide

May cause mechanical irritation.

For Component: Titanium dioxide (Rutile)

Not expected to be irritating.

For Component: Calcium sulfate

May cause irritation with symptoms of reddening, tearing and stinging.

Ingestion

Acute Ingestion

For Product: DESERT BUFF CH

Not expected to be harmful if swallowed.

For Component: Crystalline Quartz Silica

Not expected to be harmful if swallowed.

For Component: Titanium dioxide (Rutile)

Not expected to be harmful if swallowed.

For Component: Calcium sulfate

Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Not expected to be harmful if swallowed.

General Effects of Exposure

Acute Effects of Exposure

For Product: DESERT BUFF CH

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.

For Component: Crystalline Quartz Silica

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Chronic Effects of Exposure

For Product: DESERT BUFF CH

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.

For Component: Crystalline Quartz Silica

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: DESERT BUFF CH

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.

For Component: Iron (III) Oxide

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.

Carcinogenic Effects

For Component: Titanium dioxide (Rutile)

Human epidemiology studies do not suggest an association between occupational exposure to titanium dioxide and risk of cancer.

Carcinogenicity:

Crystalline Quartz Silica

NTP - Hazard Designation: Known carcinogen.

IARC - Overall evaluation: 1 Human carcinogen.

Titanium dioxide (Rutile) IARC - Overall evaluation: 2B Possible carcinogen.

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Crystalline Quartz Silica	14808-60-7
20 - 30%	Portland Cement	65997-15-1
1 - 5%	Iron (III) Oxide	1309-37-1
1 - 5%	Titanium dioxide (Rutile)	13463-67-7
1 - 5%	Calcium sulfate	7778-18-9

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. Wash clothing and shoes before reuse.

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.

Unusual Fire/Explosion Hazards

Water runoff from fire fighting may be corrosive.

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 contact with moisture/water. Minimize dust generation and accumulation.

8. Exposure Controls / Personal Protection

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.

Portland Cement (65997-15-1)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 10 mg/m³ The value is for particulate matter containing no asbestos and <1% crystalline silica.

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-3 (29 CFR 1910.1000)

Time Weighted Average (TWA): 50 millions of particles per cubic foot of air

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.

Titanium dioxide (Rutile) (13463-67-7)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m3
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 15 mg/m3 (Total dust.)
US. ACGIH Threshold Limit Values
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

Calcium sulfate (7778-18-9)

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. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 10 mg/m3 (Inhalable fraction.)

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:	Light, Tan
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: Insoluble
Bulk Density: Not Established

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerization does not occur. Contact with water/moisture causes formation of corrosive reaction products.

Stability

Stable

Materials to avoid

Oxidizing agents

Conditions to avoid

None known.

Hazardous decomposition products

None known.

11. Toxicological Information

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

Toxicity Data for Portland Cement

Skin Irritation

rabbit, Corrosive

Eye Irritation

rabbit, Non-irritating

Human, Eye Irritation

Sensitization

non-sensitizer

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 Titanium dioxide (Rutile)**Acute Oral Toxicity**

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

Acute Inhalation Toxicity

LC0: > 6.82 mg/l, dust/particulate, 4 hrs (Rat)

Acute dermal toxicity

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

Skin Irritation

rabbit, Exposure Time: 24 hrs, Non-irritating

Eye Irritation

rabbit, Draize, Non-irritating

Sensitization

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

dermal: non-sensitizer (Human, Patch Test)

Repeated Dose Toxicity

28 Days, inhalation: NOAEL: 35 mg/m³, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

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

Genetic Toxicity in Vivo:

Drosophila SLRL test: negative (Drosophila melanogaster)

Carcinogenicity

In lifetime inhalation studies of rats, airborne respirable-sized titanium dioxide particles were shown to cause lung tumors at concentrations associated with substantial particle lung burdens and pulmonary overload. Mice and hamsters did not develop lung tumors under similar testing conditions.

Toxicity Data for Calcium sulfate**Acute Oral Toxicity**

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

Skin Irritation

Human, Non-irritating

Eye Irritation

Human, Non-irritating

Sensitization

non-sensitizer (Human)

Mutagenicity

Genetic Toxicity in Vitro:

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

12. Ecological Information

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 Titanium dioxide (Rutile)

Acute and Prolonged Toxicity to Fish

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

Acute Toxicity to Aquatic Invertebrates

EC0: > 3 mg/l (Water flea (Daphnia magna))

Toxicity to Microorganisms

EC0: > 10,000 mg/l, (Pseudomonas fluorescens, 24 hrs)

EC0: > 5,000 mg/l, (Escherichia coli)

Ecological Data for Calcium sulfate

Biodegradation

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

Acute and Prolonged Toxicity to Fish

2,980 mg/l (Bluegill (Lepomis macrochirus), 96 hrs)

Acute Toxicity to Aquatic Invertebrates

EC0: 2,500 - 5,000 mg/l (72 hrs)

Toxicity to Aquatic Plants

EC50: 3,200 mg/l, (other: algae, 5 Days)

13. Disposal considerations

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state, provincial, and/or 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.

Trace heavy metal content reported below is based on random sample analyses and content may vary from batch to batch.

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

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Crystalline Quartz Silica	14808-60-7
20 - 30%	Portland Cement	65997-15-1
1 - 5%	Iron (III) Oxide	1309-37-1
1 - 5%	Titanium dioxide (Rutile)	13463-67-7
1 - 5%	Calcium sulfate	7778-18-9

Pennsylvania Right to Know Special Hazard Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
0.015%	Nickel (Ni)	7440-02-0
0.015%	Chromium	7440-47-3

MA Right to Know Extraordinarily Hazardous Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Crystalline Quartz Silica	14808-60-7
0.015%	Nickel (Ni)	7440-02-0
0.015%	Chromium	7440-47-3

California Prop. 65:

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

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Crystalline Quartz Silica	14808-60-7
0.015%	Nickel (Ni)	7440-02-0

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: 000000002773
Version Date: 08/14/2007
Report Version: 3.12

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|| Changes since the last version will be highlighted in the margin. This version replaces all previous versions.