



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product name	Reflex Product Series
Product name(s) covered	See Section 16 for Product Names Covered.
MSDS name	Reflex Product Series - Various Colors
CAS number	Mixture
Generic description	Grout/Cement
Manufacturer	Bostik, Inc. 211 Boston Street Middleton, MA 01949 USA
24 hour emergency assistance	Telephone: 1-800-227-0332
General assistance	Telephone: 1-978-777-0100
MSDS assistance	Telephone: 1-414-607-1347

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component(s)	CAS #	Percent
Portland Cement	65997-15-1	30 - 60
Silica, Quartz	14808-60-7	30 - 60
Gypsum (Ca(SO ₄).2H ₂ O)	13397-24-5	0.5 - 1.5

Composition comments Chronic overexposure to Silica can cause chronic lung disease (Silicosis) and/or cancer. Portland Cement contains up to 10 ppm (0.001%) Hexavalent chromium, which is a skin sensitizer and carcinogen. In its end use form, this product has a high pH and is caustic.

Chemical characterization Parts Per Million (ppm) = 0.0001%
mg/kg = 1 ppm (0.0001%)
g/kg = 1000 ppm (0.1%)
Conversion from mg/m³ to ppm: ppm = (mg/m³ / molecular weight in grams) x 24.45

3. HAZARDS IDENTIFICATION

Emergency overview	Exposure to dust may be irritating to eyes, nose, and throat. Chronic lung disease (silicosis) and/or lung cancer may result from prolonged/repeated breathing of Silica dust. This product contains trace amounts of hexavalent chromium, a skin sensitizer and human carcinogen. Prolonged/repeated exposure may cause severe allergic skin reactions and/or cancer. Wet product has a high pH and is caustic. Wet product or dry product on moist skin can potentially cause severe irritation and/or irreversible tissue damage due to chemical (caustic) burns.
Potential health effects	
Skin	Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis. Mechanical rubbing may increase skin irritation. Skin contact may cause an allergic response in some individuals due to trace amounts of chromium (6+) salts. Symptoms can range from a mild rash to severe skin ulcers. Persons already sensitized to hexavalent chromium may experience symptoms after minimal exposure. Wet product has a high pH and is caustic. Exposure of sufficient duration to wet product, or to dry product on moist skin, can cause serious, potentially irreversible tissue damage due to chemical (caustic) burns, including third degree burns.
Eyes	Airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with large amounts of dry powder or with wet product can cause moderate eye irritation, chemical burns and blindness. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Inhalation	This product contains free crystalline silica. Prolonged or repeated inhalation of crystalline silica can aggravate lung conditions and lead to silicosis, a seriously disabling and potentially fatal lung disease. Inhalation of free crystalline silica has also been linked to increased occurrence of renal disease and auto immune disorders.
Ingestion	May cause nausea, vomiting, pain, stomach upset, and diarrhea. Ingestion of large quantities may cause chemical burns in the mouth, throat, stomach, and digestive tract.
Target organs	Respiratory tract - Silica can target and damage the lungs. Some studies show an increased incidence in kidney and end-stage renal disease in individuals exposed to respirable Silica. Hexavalent chromium can cause skin sensitization and damage.

4. FIRST AID MEASURES

First aid

Skin	Wash affected area with mild soap and water. If irritation persists, get medical attention. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged, unprotected exposures to wet product.
Eye	Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately.
Inhalation	Remove to fresh air. Get medical attention immediately for a large dose exposure or if cough or other symptoms develop.
Ingestion	Due to the physical nature of this material, ingestion is unlikely to occur. If ingestion of a large amount does occur, get medical attention immediately. Do not induce vomiting unless directed to do so by medical personnel.
Notes to physician	Short-term exposure to very large amounts of respirable crystalline silica can cause serious lung inflammation and pulmonary edema, resulting in shortness of breath and low blood oxygen levels. Longer-term exposure may result in nodules of chronic inflammation and scarring in the lungs and chest lymph nodes. Symptoms of long-term exposure may resemble those of chronic obstructive pulmonary disease (COPD).

5. FIRE FIGHTING MEASURES

Hazardous combustion products	Non-combustible, substance itself does not burn.
Extinguishing media	Use any media suitable for the surrounding fires.
Basic fire fighting procedures	Not a fire hazard. This material will not burn. Wet product has a high pH and is caustic. Use personal protective equipment to prevent inhalation of airborne product and eye and skin contact with wet or dry product.
Dust explosion hazard	None Known
Sensitivity to mechanical impact	None Known
Sensitivity to static discharge	None Known
Flash point	Non- Flammable

6. ACCIDENTAL RELEASE MEASURES

Emergency action	Avoid actions that cause the dry product to become airborne during clean up. Avoid inhalation and contact with eyes and skin. Place spilled material into a container for reuse or proper disposal. Wet product has a high pH and is caustic. Wear appropriate protective equipment as described in Section 8.
Reporting	See Federal reporting requirements listed in Section 15. We recommend you contact local authorities to determine if there may be other local reporting requirements.

7. HANDLING & STORAGE

Handling	Avoid breathing dusts from this material. Remove dust fines from air or wear recommended respirator. Avoid contact with skin and eyes. Promptly remove and launder clothing that is dusty or wet with product. Thoroughly wash skin after exposure to dry or wet product.
Storage	Store in a clean, dry area. Keep containers closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls	Use local or general ventilation to control airborne dust below applicable exposure limits.
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Eye protection Wear safety goggles to prevent eye contact with dry or wet product. In extremely dusty or unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury.

Skin and body protection Wear impervious abrasion and alkaline resistant gloves and boots, long sleeved shirt, long pants, safety goggles and other protective clothing as required to prevent skin contact. Remove clothing and protective equipment that becomes dusty from dry product or saturated with wet product and immediately wash exposed areas.

Respiratory protection If ventilation is not sufficient to effectively prevent buildup of dusts, wear appropriate NIOSH/MSHA respiratory protection.

General Eyewash fountains and emergency showers should be readily available.

Exposure limits

ACGIH - Threshold Limits Values - Time Weighted Averages (TLV-TWA)

Gypsum (Ca(SO4).2H2O)	13397-24-5	<u>10 mg/m3 TWA (inhalable fraction, listed under Calcium sulfate)</u>
Portland Cement	65997-15-1	<u>10 mg/m3 TWA (particulate matter containing no asbestos and <1% crystalline silica)</u>
Silica, Quartz	14808-60-7	<u>0.025 mg/m3 TWA (respirable fraction)</u>

NIOSH - Pocket Guide - TWAs

Gypsum (Ca(SO4).2H2O)	13397-24-5	<u>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)</u>
Portland Cement	65997-15-1	<u>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)</u>
Silica, Quartz	14808-60-7	<u>0.05 mg/m3 TWA (respirable dust)</u>

U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)

Gypsum (Ca(SO4).2H2O)	13397-24-5	<u>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>
Portland Cement	65997-15-1	<u>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>

U.S. - OSHA - Vacated PELs - TWAs

Gypsum (Ca(SO4).2H2O)	13397-24-5	<u>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>
Portland Cement	65997-15-1	<u>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</u>
Silica, Quartz	14808-60-7	<u>0.1 mg/m3 TWA (respirable dust)</u>

9. PHYSICAL & CHEMICAL PROPERTIES

Target solids 100 %

pH N/A (pH of wet product is 12.0 or greater)

Density 2.55 g/cc

Odor Slight

Color Various

Physical state Powder

Freeze protect No

10. STABILITY & REACTIVITY

Hazardous reactions/decomposition products Wet product has a high pH and is caustic. This product is incompatible with acids, ammonia salts, and aluminum metal.

Stability Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Toxicological data If any toxicological data is available, it will be listed below:

LD50

Toxicology Data - Selected LD50s and LC50s

Silica, Quartz	14808-60-7	<u>Oral LD50 Rat: 500 mg/kg</u>
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Chronic effects

Chronic overexposure to Silica has been associated with the development of chronic lung disease (Silicosis) and cancer. Hexavalent chromium can cause skin sensitization, dermatitis, and cancer. Individuals already sensitized to Hexavalent chromium can have an adverse reaction to even small exposures.

Carcinogenicity

IARC - Group 1 (Carcinogenic to Humans)

Silica, Quartz 14808-60-7 Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources)

NIOSH - Pocket Guide - Potential Occupational Carcinogens

Silica, Quartz 14808-60-7 potential occupational carcinogen

NTP (National Toxicology Program) - Report on Carcinogens - Known Carcinogens

Silica, Quartz 14808-60-7 Known Carcinogen

U.S. - OSHA - Hazard Communication Carcinogens

Silica, Quartz 14808-60-7 Present

12. ECOLOGICAL INFORMATION

Ecotoxicological information Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

13. DISPOSAL CONSIDERATIONS

It is the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable local, state and federal regulations.

Waste disposal Dispose of in compliance with all local, state, and federal regulations.

14. TRANSPORT INFORMATION

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

Federal regulations All components are on the U.S. EPA TSCA Inventory List.

State regulations If this product contains any ingredients listed under California Proposition 65, they will be noted below:

U.S. - California - Proposition 65 - Carcinogens List

Acetaldehyde 75-07-0 carcinogen, initial date 4/1/88 Trace impurity

Silica, Quartz 14808-60-7 carcinogen, initial date 10/1/88 (airborne particles of respirable size)

International regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

All components are included on the Canadian Domestic Substances List (DSL).

HMIS Ratings

Health: 3*

Flammability: 0

Physical hazard: 0

Personal protection: X

SARA 311/312 HAZARD CATEGORIES

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

WHMIS status

Controlled

WHMIS labeling



WHMIS classification

D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC
E - Corrosive

16. OTHER INFORMATION**Product name(s) covered**

G00718 - REFLEX 718-50 WHITE
G90918 - REFLEX 918-50 GRAY

Disclaimer

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

Further information

Any characters following an individual item number are just designations for the various types of packaging that are available for this product. For example, a product "G12345-XX" is item number "G12345" with a packaging designation of "XX". These characters do not indicate a different product nor a different regulatory, health, safety and/or environmental status. This document covers the item numbers listed above for all of their packaging types.

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Prepared by

Pam Larsen