

Safety Data Sheet- Bypass Dust

Continental Cement Company, L.L.C.
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Hannibal, MO 63401
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Safety Data Sheet For Bypass Dust

Section 1 – Product and Company Information

1.1 Product Identifier

Identity: Bypass Dust

Synonyms: Bypass Dust, BPD, Kiln Bypass Dust

1.2 Identified Use

Use: Byproduct of Portland Cement manufacturing process and can be used for soil stabilization and augmentation.

Manufacturer Name: Continental Cement

Address: 10107 Highway 79
Hannibal, Mo. 63401

Transportation Emergency Telephone #'s:

Day Time: 573.221.1740

Night Time: 573.221.1740

Telephone #

for Information: 573.221.1740

Website: www.continentalcement.com

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Section 2 – Hazardous Identification

2.1- Classification of the Substance or Material

GHS-US Classification-(Category)

Skin Corrosion/Irritation: 1A

Serious Eye Damage: 1

Skin Sensitization: Category 1

Carcinogenicity: 1A

Specific Target Organ Toxicity (Chronic Exposure): 1

2.2 Label Requirements

Symbol(s)



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Signal Word: Danger

Hazard Statements:

- H314: Causes Severe Skin Burns and Eye Damage
- H318: Causes Serious Eye Damage
- H335: May Cause Allergy or Asthma Symptoms or Breathing Difficulties if Inhaled
- H350: May Cause Cancer
- H372: Causes damage to organs (lungs) through prolonged or repeated exposure

Precautionary Statements

Prevention Statements

- P201: Obtain special instructions before use
- P202: Do not handle until all safety precautions have been read and understood
- P260: Do not breathe dusts
- P261: Avoid breathing dust/fume/gas/mist/vapors/sprays
- P264: Wash thoroughly after handling
- P270: Do not eat, drink, or smoke when using this product
- P280: Wear protective gloves, protective clothing, eye protection, face protection
- P361: Remove contaminated clothing and wash before reuse
- P271: Use outdoors or in a well-ventilated area
- P284: In case of inadequate ventilation: Use Respiratory Protection

Response Statements

- P304+P 340+P312: If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
- P302+ P352: IF ON SKIN: Wash with plenty of soap and water
- P305+P351+P338+P310: If in eyes: Rinses cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. Immediately call a poison center/doctor
- P308+P313: If exposed or concerned: Get medical advice/attention
- P332+ P313: If skin irritation occurs: get medical advice/attention
- P362: Take of contaminated clothing and wash before reuse.

Storage Statements

- P403+P233: Store in a well-ventilated place. Store in an appropriate container or containment
- P405: Store locked up

Disposal Statements

- Dispose of contents and containers in accordance with local, state, and federal Regulations

2.3 Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) or sensitivity to hexavalent chromium can be aggravated by exposure.

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Section 3 – Composition/Information on Ingredients

3.2 Mixture

CAS #	Component	Percent (Range)	GHS Ingredient Classification
1317-65-3	Limestone (Calcium carbonate)	0 - 80	Not Classified
1305-78-8	Calcium Oxide	5 - 65	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317 STOT SE 3, H335
7631-86-9	Silica dioxide (Amorphous)	0 - 20	Not Classified
14808-60-7	Quartz	0.1 - <1	Carcinogen 1A, H350 STOT SE 3, H335 STOT RE 1, H372
12136-45-7	Potassium Oxide	0-15	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317
13397-24-5	Gypsum (Calcium sulfate)	0 – 20	Not Classified
7446-11-9	Sulfur trioxide	1 – 12	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317
1344-28-1	Aluminum oxide	0 – 5	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317
1309-37-1	Iron oxide	0 – 5	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317
1309-48-4	Magnesium oxide	0 – 5	Skin Irritant 2, H315 Eye Damage 1, H318 Skin Sens. 1, H317

Other Components: Bypass dust has variable compositions depending upon the intermediate products produced in the cement kiln. Cement is made from materials mined from the earth and processed using intense heat provided by various fuels. A chemical analysis of bypass dust may reveal trace amounts of naturally occurring but potentially harmful chemical compounds such as crystalline silica, potassium and sodium compounds, heavy metals including cadmium, chromium (including hexavalent chromium), nickel and lead depending on the source of the raw materials and fuels.

Section 4 – First Aid Measures

4.1 First Aid:

General Advice: Move out of hazardous environment. Seek medical attention as needed. Obtain SDS for informational purposes

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First-aid measures after eye contact: Rinse eyes immediately with water. Continue rinsing for several minutes to ensure particle removal. Get medical consultation immediately

First-aid measures after skin contact: Flush skin with water immediately for 15 minutes. Wash skin with mild soap. Remove contaminated clothing. Seek medical attention immediately.

First-aid measures after ingestion: Do not induce vomiting. Contact poison center/physician immediately

First-aid measures after inhalation: Remove victim to fresh air. Contact medical personnel immediately

4.2 Important Symptoms or Effects

Inhalation: Difficulty Breathing, Respiratory Irritation

Skin Contact: Burns, Pain, Blisters

Eye Contact: Burn, Pain, Discomfort, Severe Eye Damage

Ingestion: Nausea, Vomiting

Section 5 – Firefighting Measures

Extinguishing Equipment: Suitable media to extinguish surrounding environment.

Hazardous Combustion Products: None

Fire Hazard: Product does not burn.

Hazardous Decomposition or Byproducts: None spontaneously.

Firefighting Instructions: Wear appropriate firefighting equipment.

Section 6 – Accidental Release Measures

General Measures: Use personal protective equipment outlined in Section 8.

Containment: Stop the spill in a safe manner. Create barricade to contain.

Clean-Up: Collect the material and place in approved containers. Ensure that dust generation is down to a minimum due to the hazards of the dust.

Environmental: Ensure product is quickly swept up to ensure cement does not go into sewers, ditches, drains or waterways.

Section 7 – Handling and Storage

Handling Procedures:

Avoid skin and eye contact with the material or breathing the dust. Wear appropriate personal protective equipment as described in Section 8. Wash thoroughly after exposure to product. Product is an engulfment hazard if stored in large enough container.

Storage Procedures:

Store in a cool, dry environment where only authorized personnel has access to.

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Precautions to Be Taken for Handling and Storing:

Protect against physical damage. Store the material in a cool, dry well-ventilated location.

Incompatible Materials:

Water/moisture exposure will cause material to generate heat. Keep away from strong acids and oxidizers.

Section 8 – Exposure Control/Personal Protection

Control Parameters:

Exposure Limits for Individual Components

(T=Total Respirable, R=Respirable fraction, I=Inhalable-aerosol)

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Portland Cement	15 mg/m ³ (T); 5 mg/m ³ (R)	1 mg/m ³ (R) <1% Crystalline silica	10 mg/m ³ (T); 5 mg/m ³ (R)
Limestone (Calcium carbonate)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³	10 mg/m ³ (T); 5 mg/m ³ (R)
Calcium oxide	5 mg/m ³	2 mg/m ³	2 mg/m ³
Silica dioxide (Amorphous)	80 mg/m ³ / (% SiO ₂)	None	6 mg/m ³
Crystalline Silica (Quartz)	10 mg/m ³ (R) / (% SiO ₂ + 2) 30 mg/m ³ (T) / (% SiO ₂ + 2)	0.025 mg/m ³ (R)	0.05 mg/m ³ (R)
Gypsum (Calcium Sulfate)	15 mg/m ³ (T); 5 mg/m ³ (R)	10 mg/m ³ (T)	10 mg/m ³ (T); 5 mg/m ³ (R)
Sulfur trioxide	1 mg/m ³ (as H ₂ SO ₄)	0.2 mg/m ³ (as H ₂ SO ₄)	1 mg/m ³ (as H ₂ SO ₄)
Aluminum Oxide	15 mg/m ³ (T) 5 mg/m ³ (R) (as Al)	1 mg/m ³ (R) (as Al metal & insoluble compounds)	Not established
Iron Oxide	10 mg/m ³ (as fume)	5 mg/m ³ (R)	5 mg/m ³ (dust/fume as Fe)
Magnesium oxide	15 mg/m ³	10 mg/m ³ (I)	Not established

Exposure Controls:

Engineering:

Provide exhaust or local ventilation or other engineering controls to keep the airborne concentrations of dust below their respective threshold limit value if needed.

Respiratory Protection (Specify Type):

Use local/general ventilation if possible. In situations with poor ventilation, use a NIOSH approved respirator or dust mask to protect against the inhalation of dust.

Protective Gloves:

Suitable gloves with wrist/arm cuffs should be worn to protect avoid direct contact with the skin.

Eye Protection:

Use chemical safety glasses/goggles and/or a full face shield. Avoid wearing contact lens when using this product.

Other Protective Clothing or Equipment:

Wear impervious protective clothing, including boots, gloves, and coveralls, as appropriate, to prevent skin contact. Structural firefighter's protective clothing will only provide limited protection.

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Section 9 – Physical and Chemical Properties

Physical State: Solid
Appearance: Tan/grey/off-white powder
Upper Flammability: No data available
Lower Flammability: No data available
Odor: No observable odor
Vapor Pressure: No data available
Vapor Density: No data available
pH: 12-14 (in water)
Relative Density: No data available
Melting Point: No data available
Freezing Point: No data available
Solubility: Slight
Initial Boiling point: >1832 °F (1000 °C)
Boiling Range: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability: Not flammable
Vapor Pressure: No data available
Vapor Density: No data available
Relative Density: No data available
Solubility: Water: 0.1 - 1 % (slightly soluble)
Partition Coefficient: No data available
Auto Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

Section 10 – Stability and Reactivity

10.1 Reactivity

Reacts with water to form calcium hydroxide which can irritate or damage skin and eyes. Do not mix with other chemicals.

10.2: Stability

Stable under normal dry storage conditions.

10.3 Conditions to Avoid

Strong acids, aluminum metal and oxidizers.

10.4 Incompatible Materials

None Known

10.5 Hazardous Decomposition Products

None Known

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Section 11 – Toxicological information

Quartz (14808-60-7)

LD50 oral rat=500 mg/kg

IARC Group=1

NTP Status=2

Calcium Oxide (CAS 1305-78-8)

Carcinogenicity:

Not identified as a known or suspected carcinogen.

Acute Toxicity:

No data available

Skin Corrosion/Irritation:

Skin-human

Result: severe skin irritation

Serious eye damage/irritation:

Eyes-Rabbit

Result: Serious eye damage is possible

Respiratory/Skin sensitization:

No data

Germ Cell Mutagenicity:

No data

Reproductive Toxicity:

No data Available

Specific target organ toxicity-single exposure:

Inhalation-Irritation is possible

Specific target organ toxicity-repeated exposure:

No data

Aspiration hazard:

No data available

Routes of Exposure:

Skin and eye contact, inhalation, and ingestion.

Specific Target Organ Toxicity (single exposure): Respiratory irritation

Skin corrosion/irritation: Severe burns

Eye Damage/Irritation: Serious eye damage

Respiratory/Skin Irritation: Allergic skin reaction, Respiratory tract irritation

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Carcinogenicity: Can cause cancer (Quartz)

Symptoms after contact related to exposure/toxicological characteristics

Skin Contact: Burns, irritation, blisters, rash, pain and discomfort

Eye Contact: Burn, eye damage, redness, excessive watering of eye

Ingestion: Nausea, Vomiting

Inhalation: Irritation of the respiratory tract

Section 12 – Ecological Information

NO INFORMATION IS AVAILABLE

Section 13 – Disposal Considerations

13.1 Waste Treatment Methods

Disposal Recommendations: Dispose material in accordance with any applicable local, state, and Federal regulations.

Section 15 – Regulatory Information

Please contact applicable local, state, and Federal agencies for applicable regulations

Section 16 – Other information

SDS was prepared according to the Hazard Communication Standard (CFR 29 1910.1200)

Prepared 02/01/2021

Abbreviations

ACGIH —	American Conference of Governmental Industrial Hygienists
CAS —	Chemical Abstract Service
CERCLA —	Comprehensive Emergency Response and Comprehensive Liability Act
CFR —	Code of Federal Regulations DOT — Department of Transportation
GHS —	Globally Harmonized System Globally Harmonized System
IARC —	International Agency for Research on Cancer
IMDG —	International Maritime Dangerous Goods
NIOSH —	National Institute of Occupational Safety and Health
NTP —	National Toxicology Program
OSHA —	Occupational Safety and Health Administration
PEL —	Permissible Exposure Limit
REL —	Recommended Exposure Limit RQ — Reportable Quantity
SARA —	Superfund Amendments and Reauthorization Act
SDS —	Safety Data Sheet
TLV —	Threshold Limit Value
TPQ —	Threshold Planning Quantity
TSCA —	Toxic Substances Control Act
TWA —	Time Weighted Average