



Bottom Ash

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 08/03/2017 Revision date: 1/15/2018 Supersedes: 06/08/2017

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Bottom Ash
Formula : UVCB Substance

1.2. Recommended use and restrictions on use

Recommended use : Component of concrete, roofing material, bricks

1.3. Supplier

CEMEX
10100 Katy Freeway, Suite 300
Houston TX, 77043
T Customer Care 1-800-99-CEMEX
www.CEMEXUSA.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2	H315
Serious eye damage/eye irritation Category 1	H318
Carcinogenicity Category 1A	H350
Specific target organ toxicity (single exposure) Category 3	H335
Specific target organ toxicity (repeated exposure) Category 2	H373

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H315 - Causes skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H350 - May cause cancer (Inhalation)
H373 - May cause damage to organs (respiratory system/digestive system) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing dust
P264 - Wash hands, forearms and face thoroughly after handling
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, protective clothing, protective gloves
P302+P352 - If on skin: wash with plenty of soap. DO NOT rub or scrub irritated area.
P304+P340 - If inhaled: remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: get medical advice/attention
P310 - Immediately call a doctor

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P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see section 4 on this SDS)
P332+P313 - If skin irritation occurs: get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to in accordance with local/regional/international regulations.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Calcium Oxide	(CAS No) 1305-78-8	5 - 33	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
Quartz	(CAS No) 14808-60-7	1 - 5	Eye Irrit. 2A, H319 Carc. 1A, H350 STOT SE 3, H335 STOT RE 2, H373

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : Direct exposure may cause respiratory irritation, eye irritation and skin irritation. The product dust can dry and irritate the skin and cause dermatitis and can irritate eyes and skin through mechanical abrasion.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Harmful: may cause lung damage if swallowed.
Chronic symptoms : Chronic exposure may cause lung damage from repeated exposure. Chronic inhalation of dusts containing respirable crystalline silica may result in silicosis.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product to the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Practice good housekeeping. Use adequate exhaust ventilation, dust collection and/or water mist to maintain airborne dust concentrations below permissible exposure limits (note: respirable crystalline silica dust may be in the air without a visible dust cloud).
Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain and test ventilation and dust collection equipment. In cases of insufficient ventilation, wear a NIOSH approved respirator for silica dust when handling or disposing dust from this product. Avoid contact with skin and eyes. Wash or vacuum clothing that has become dusty. Avoid eating, smoking, or drinking while handling the material.
Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Fused silica (amorphous) (60676-86-0)		
ACGIH	ACGIH TWA (mg/m ³)	Withdrawn
OSHA	OSHA PEL (TWA) (mg/m ³)	TWA 20 mppcf (80 mg/m ³ /%SiO ₂) See Appendix C (Mineral Dusts)
OSHA	Remark (OSHA)	(3) See Table Z-3.
Quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ A2
ACGIH	Remark (ACGIH)	Lung Cancer; Silicosis
OSHA	OSHA PEL (TWA) (mg/m ³)	50 µg/m ³
OSHA	Remark (OSHA)	(3) See Table Z-3.

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Quartz (14808-60-7)		
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ Ca
NIOSH	Remark (NIOSH)	See Appendix A
Calcium Oxide (1305-78-8)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³
NIOSH	NIOSH IDLH (mg/m ³)	25 mg/m ³
Ash (68131-74-8)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (Respirable)
OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (Total); 10 mg/m ³ (Respirable)
NIOSH	Remark (NIOSH)	see Appendix D

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Course large sand; up to 1/2" particle size with possible solidified masses up to 1" in diameter.
Color : Light tan, grey, black
Odor : Odorless
Odor threshold : No data available
pH : 11 - 12
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Not combustible.
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : Not applicable
Solubility : Slight.
Log Pow : No data available
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available

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Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

The material is an inert, inorganic material primarily composed of elemental oxides.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Product can become airborne in moderate winds. Dry material should be stored in silos. Materials stored out of doors should be covered or maintained in a damp condition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation. pH: 11 - 12
Serious eye damage/irritation	: Causes serious eye damage. pH: 11 - 12
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer (Inhalation).

Quartz (14808-60-7)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs (respiratory system/digestive system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Harmful: may cause lung damage if swallowed.
Chronic symptoms	: Chronic exposure may cause lung damage from repeated exposure. Chronic inhalation of dusts containing respirable crystalline silica may result in silicosis.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ash (68131-74-8)	
LC50 fish	> 100 mg/l
ErC50 (algae)	> 10 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.
GWPmix comment : No known effects from this product.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated

TDG

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Fused silica (amorphous) (60676-86-0)
Listed on the Canadian DSL (Domestic Substances List)
Quartz (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List)
Calcium Oxide (1305-78-8)
Listed on the Canadian DSL (Domestic Substances List)
Ash (68131-74-8)
Listed on the Canadian DSL (Domestic Substances List)

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EU-Regulations

No additional information available

National regulations

Quartz (14808-60-7)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

Quartz (14808-60-7)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	

Fused silica (amorphous) (60676-86-0)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List

Quartz (14808-60-7)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List

Calcium Oxide (1305-78-8)

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

SECTION 16: Other information

Revision date : 1/15/2018

Data sources : Environmental Health & Toxicology - National Library of Medicine [<http://sis.nlm.nih.gov/enviro.html>]. ECHA - [http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9b1369-7454-687c-e044-00144f67d249/DISS-9d9b1369-7454-687c-e044-00144f67d249.html](http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d9b1369-7454-687c-e044-00144f67d249/DISS-9d9b1369-7454-687c-e044-00144f67d249_DISS-9d9b1369-7454-687c-e044-00144f67d249.html); GESTIS - [http://gestis-en.itrust.de/nxt/gateway.dll/gestis_en/000000.xml?f=templates\\$fn=default.htm\\$3.0](http://gestis-en.itrust.de/nxt/gateway.dll/gestis_en/000000.xml?f=templates$fn=default.htm$3.0); ChemIDPlus - <http://chem.sis.nlm.nih.gov/chemidplus/rn/100-51-6>; Sciencelab.com, Inc. MSDS dated May 21, 2013. GESTIS DNEL Database [[http://dnel-en.itrust.de/nxt/gateway.dll/dnel_en/000000.xml?f=templates\\$fn=default.htm\\$vid=dneleng:ddbeng\\$3.0/](http://dnel-en.itrust.de/nxt/gateway.dll/dnel_en/000000.xml?f=templates$fn=default.htm$vid=dneleng:ddbeng$3.0/)].

Full text of H-phrases:

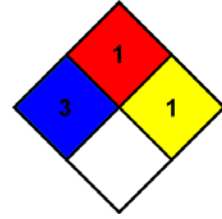
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H373	May cause damage to organs through prolonged or repeated exposure

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- NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
- NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.
- NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



HMIS III Rating

- Health : * Chronic Hazard
- Flammability : 0 Minimal Hazard - Materials that will not burn
- Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

SDS US (GHS HazCom 2012)

While the information provided in this safety data sheet is believed to provide a useful summary of the hazards of Bottom Ashes it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with Bottom Ash to produce Bottom Ashproducts. Users should review other relevant material safety data sheets before working with this Bottom Ashor working on Bottom Ashproducts, for example, Bottom Ashconcrete. SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CEMEX, Inc. except that the product shall conform to contracted specifications. The information provided herein was believed by CEMEX to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with Bottom Ash to produce Bottom Ashproducts. Users should review other relevant safety data sheets before working with Bottom Ashor working on Bottom Ashproducts, for example, Bottom Ashconcrete.