

SAFETY DATA SHEET BED ASH

OSHA Hazard Communication Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

SECTION 1. IDENTIFICATION		
Product Name	Bed Ash	
Chemical Name	Calcium Oxide, Calcium Carbonate, Calcium Hydroxide	
Synonyms	Boiler Ash, Furnace Ash, Combustion Ash, Fly Ash	
Uses	De-Watering Sediments, Waste Solidification, Waste Fixation, Neutralization	
Distributor	Mintek Resources 3725 Pentagon Blvd. Suite 100 Beavercreek, OH 45431 Phone: 937-431-0218	
Emergency Contact	VelocityEHS: (800) 255-3924 (MIS8507735)	

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture



GHS03 Exclamation Mark



GHS05 Corrosion

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Signal Word	Danger			
Hazard-Determining Components of Labeling	Calcium	Calcium Oxide, Calcium Carbonate, Calcium Hydroxide		
Hazard Statements	H303	May be harmful if swallowed.		
	H315	Causes skin irritation.		
	H319	Causes serious eye irritation.		
	H335	May cause respiratory irritation.		
Precautionary	P101	If medical advice is needed, have product container or label at hand.		
Statements	P102	Keep out of reach of children.		
	P280	Wear protective gloves, clothing, eye protection.		
	P281	Use personal protective equipment as required.		
	P284	Wear respiratory protection.		

SECTION 3. COMPOSITION

Component	Formula	% Wt.	CAS No.	PEL
Calcium Carbonate	CaCO3	10-40	1317-65-3	10 mg/m³
Calcium Oxide	CaO	10-60	1305-78-8	2 mg/m ³
Calcium Hydroxide	Ca(OH)2	0-70	1305-62-0	5 mg/m³
Calcium Magnesium	CaMg(CO ₃) ₂	0-10	16389-88-1	10 mg/m³
Carbonate				
Silica-Crystalline Quartz	SiO ₂	0-30	14808-60-7	0.1 mg/m³ respirable
Aluminum Oxide	AI2O3	0-15	1344-28-1	10 mg/m ³
Ferric Oxide	Fe ₂ O ₃	0-5	1309-37-1	15 mg/m³



Magnesium Oxide	MgO	0-60	1309-48-4	5 mg/m³
Sulfur Trioxide	SO3	5-30	7704-34-9	10 mg/m³
SECTION 4. FIRST AID	MEASURES			
Inhalation	Acute : Irritati Chronic : Pers silica can cau	ion, sore throat, cou sistent coughing an Ise a chronic lung d	ugh, sneezing. d breathing problems. l isorder, silicosis.	ong-term exposure to
Eyes	Acute: Severe Chronic: Pos	Acute : Severe irritation, intense tearing, burns. Chronic : Possible blindness when exposure is prolonged.		
Skin	Acute : Remo case of sweat Chronic : No k	ves natural skin oil: ting. known effects.	s, blotches, itching and s	superficial burns in
Ingestion	Acute: Sore t Chronic: No k	hroat, stomach ach ‹nown effects.	es, cramps, diarrhea, vo	omiting.
<u>Treatments</u>				
Inhalation	Move victim t stopped, give	o fresh air. Seek m artificial respiratio	edical attention if neces n.	sary. If breathing has
Eyes	Immediately Pull back the medical atter	flush eyes with larg eyelid to make sur ntion immediately. [e amounts of water for e all the lime dust has b Do not rub eyes.	at least 15 minutes. een washed out. Seek
Skin	Flush expose immediately.	d area with large a	mounts of water. Seek r	nedical attention
Ingestion	Give large qu medical atter losing consci	antities of water or ntion immediately. N ousness or is uncor	fruit juice. Do not induc Never give anything by n nscious or convulsing.	e vomiting. Seek nouth if victim is rapidly

SECTION 5. FIRE FIGHTING MEASURES		
Flash Point	Non-flammable	
Autoignition Temperature	Non-flammable	
Inflammability Limits	None, Non-combustible solid, but will support combustion by liberation of oxygen.	
Explosion Risk	None by itself, but heat produced by reaction with strong acids can generate steam and pressure.	
Hazardous Combustion Products	Decomposes to produce calcium oxide (CaO), which can react with water to produce steam and pressure.	
Extinguishing Media	Use dry chemical fire extinguisher. Do not use water or halogenated compounds, except that large amounts of water may be used to deluge small quantities of lime kiln dust. Use appropriate extinguishing media for surrounding fire conditions.	
Fire Fighting Instructions	Keep personnel away from and upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (self-contained breathing apparatus).	

SECTION 6. ACCIDENTAL RELEASE MEASURES		
Individual and Collective	Avoid creating conditions which release dust – use mechanical vacuums to	
Precautions	remove dust from workspaces.	
Avoid Inhalation of Dust	Wear respiratory protection – minimum NIOSH N-95 Dust Mask.	



Cleaning Methods	Use personal protective equipment (eyes, skin and inhalation, see Section 8).
(Leaks & Spills)	Use dry methods (vacuuming, sweeping) to collect spilled materials. Avoid generating dust. For large spills, evacuate area downwind of clean-up area operations to minimize dust exposure. For small spills, store spilled materials in dry, sealed plastic or metal containers. Dust residue on surfaces may be washed with water.
Precautions for the Protection of the Environment	May not be released into surface waters without controls (increases pH).
Waste Disposal	Dispose according to federal, provincial/state, and local environmental regulations.

SECTION 7. HANDLING & STORAGE		
Handling	In open air or in ventilated places, avoid skin and eye contact, avoid creating airborne dust.	
Storage	Store in dry places sheltered from humidity. Keep away from acids. Keep out of reach of children.	

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits			
	OSHA PEL (mg/m³)	ACGIH TLV (mg/m³)	Ont. Reg. 833 TWAEV (mg/m³)
Calcium Carbonate	15 (total dust), 5 (respirable)	10	10
Calcium Oxide	5	2	2
Calcium Hydroxide	-	5 (respirable)	5
Calcium Magnesium Carbonate	10	10	-
Calcium Magnesium Oxide	2	2	-
Magnesium Carbonate	15 (total dust) 5 (respirable)	5 10	5 10
Magnesium Oxide	15	10	10
Silica - Crystalline Quartz	2.5 (total dust), 0.8 (respirable)	0.5 (respirable)	0.1

Engineering Controls	Use ventilation and dust collection to control exposure to below applicable limits.
Individual Protection Measures (I	Personal Protective Equipment):
Respiratory Protection	Wear NIOSH N-95 Dust Mask.
Eye Protection	Eye protection (chemical goggles, safety glasses and/or face shield) should be worn where there is a risk of lime exposure. Contact lenses should not be work when working with lime products.
Hand Protection	Use clean dry gloves.
Skin Protection	Cover body with suitable clothes (long sleeves shirts and trousers). Use over the angle waterproof caustic resistant footwear.



SECTION 9. PHYSICAL & CH	EMICAL PROPERTIES
Appearance	Solid, brown/white/tan/gray granular
Odor	Odorless
Odor Threshold	Not Applicable
рН	12.4 graduated solution at 25°C
Melting Point	1410°C
Boiling Point	1565°C
Flash Point	Not Applicable
Evaporation Rate	Not Applicable
Flammability	Not Applicable
Upper/Lower Flammability	Not Applicable
Vapor Pressure (+tº)	Non-Volatile
Vapor Density (air=ml)	Non-Volatile
Relative Density	720-1130 kg/ m³
Solubility	0.100 – 1.125g/100g – reactive with water to product Ca(OH) $_2$ with large amounts of heat
Partition Coefficient	Not Applicable
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	580°C
Viscosity	Not Applicable

SECTION 10. STABILITY & REA	ACTIVITY	
Stability	Stable products, not very soluble.	
Decomposition Temperature	580°C, forms calcium oxide (CaO) and water	
Reactivity	Reacts with acids to form calcium salts while generating heat. Reacts with carbon dioxide in air to form calcium carbonate.	
Conditions to Avoid	Vicinity of incompatible materials.	
Incompatibility	 Acids Reactive Fluoridated Brominated or Phosphorous Compounds Aluminum (may form hydrogen gas) Reactive Powdered Metals Organic Acid Anhydrides Nitro-organic Compounds Interhalogenated Compounds 	
Hazardous Decomposition Products	Calcium Oxide (CaO)	

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicity

LD₅₀ oral (rat) for calcium hydroxide is 7340 mg/kg. This product is not listed by MSA, OSHA, or IARC as a carcinogen, but this product may contain crystalline silica, which has been classified by IARC as (Group 1) carcinogenic to humans



when inhaled in the form of quartz or cristobalite. No reported Carcinogenicity, Reproductive Effects, Teratogenicity or Mutagenicity.

Exposure Limits	Refer to Section 8
Irritancy	Can cause severe irritation of eyes, skin, respiratory tract, and gastrointestinal tract.
Chronic Exposure:	Inhalation of silica can cause a chronic lung disorder, silicosis.

SECTION 12. ECOLOGICAL INFORMATION

Alkaline substance that increases pH to 12.4 in a saturated water solution at 25°C.

Calcium hydroxide gradually reacts with CO2 in air to form calcium carbonate (CaCO3).

Calcium carbonate is ecologically neutral.

Uncontrolled spillage in surface waters should be avoided since the increase pH could be detrimental to fish. Harmful to aquatic life in high concentration.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose according to federal, provincial/state, and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION					
Classification	TDG:	Not listed for ground transportation.			
	HMR:	Not listed for ground transportation.			
TDC, Transportation of Dangarous Goods Regulation (Canada)					

TDG: Transportation of Dangerous Goods Regulation [Canada] HMR: Hazardous Materials Regulation (USA)

SECTION 15. Regulatory Information							
Symbol							
	NFPA RATING						
	HEALTH-3	SPECIFIC HAZARD – ALK	FLASH POINTS-0	REACTIVITY-1			
	HEALTH-2	SPECIFIC HAZARD – ALK	FLASH POINTS-0	REACTIVITY-1			

SECTION 16. OTHE	ER INFORMATION
Original Prepared	05/13/2013
Revision Date	9/15/2023
Revision #	2

Calciment can be removed from vehicles using rags dampened with dilute vinegar. After applying dilute vinegar, vehicles (especially chrome surfaces) must be washed with water.

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