

SAFETY DATA SHEET (S D S)

OLDCASTLE LAWN & GARDEN, INC. DOLOMITIC QUICKLIME

1. PRODUCT & COMPANY IDENTIFICATION

- a. Product Identifier: Dolomitic Quicklime
- b. Other Means of Identification: Quicklime, CaO•MgO, Lee Lime, Lime
- c. Recommended Use of the Chemical and Restrictions on Use: Various environmental applications (including soil stabilization, pH adjustment, ash treatment, waste water treatment, and desulfurization), agricultural, portland cement additive, asphalt paving additive. Do not use with or near aluminum powder.
- d. Name, Address, and Telephone Number of Manufacturer: Oldcastle Lawn & Garden, Inc. d/b/a Oldcastle Stone Products, 110 Marble Street, Lee, Mass. 01238, Phone 413-243-0053
- e. Emergency Telephone Number: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION:

- a. Hazard Classification:
 - i. Eye Damage Category - 1
 - ii. Skin Irritation Category - 2
 - iii. Specific Target Organ Toxicity Single Exposure Category - 3 (Respiratory System)
 - iv. Carcinogen Category - 1 (due to presence of $\geq 0.1\%$ crystalline silica)
- b. Label Elements:
 - i. Signal Word: Danger
 - ii. Hazard Statements: Causes Skin Irritation, Causes Serious Eye Damage, May Cause Cancer (due to presence of $\geq 0.1\%$ crystalline silica), May Cause Respiratory Irritation, Reacts Violently with Water Releasing Heat Which Can Ignite Combustible Materials.
 - iii. Symbols:



iv. Precautionary Statements: Wear protective gloves and eye protection. Wash exposed skin thoroughly after handling. Avoid breathing dust. Use only outdoors or in a well-ventilated area. Keep only in original container. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

If on skin: wash exposed skin with plenty of water. If skin irritation occurs, get medical attention. Take off contaminated clothing and wash it before reuse.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and if it's easy to do so. Continue rinsing. Seek medical attention immediately.

If inhaled: Remove person to fresh air and keep comfortable. Seek medical attention if the person feels unwell.

If exposed or concerned - obtain medical advice.

Store in corrosive resistant container. Do not store in an aluminum container when transporting by air.

Dispose of contents or containers in accordance with applicable regulations. Do not use water on material spills.

c. Hazards Not Otherwise Classified:

i. Dolomitic Quicklime reacts violently upon contact with water releasing heat which can ignite combustible materials.

d. Ingredients with Unknown Toxicity: NOT APPLICABLE

3. COMPOSITION/INFORMATION ON INGREDIENTS

a. Chemical name: Calcium-Magnesium Oxide

b. Common Name and Synonyms: Dolomitic Quicklime, lime, CaO•MgO

c. CAS Numbers:

COMPONENT	CAS#	% BY WT.
Calcium Oxide	1305-78-8	55-59
Magnesium Oxide	1309-48-4	35-38
Crystalline Silica	14808-60-7	>0.1

4. FIRST AID MEASURES

a. Description of First Aid Measures:

i. Eyes - Contact can cause severe irritation or burning of eyes, including permanent damage. Immediately flush eyes with generous amounts of water for at least fifteen minutes. Pull back the eyelid while washing to ensure all lime dust has been removed. Seek medical attention immediately. Do NOT rub eyes.

ii. Skin - Contact can cause severe irritation or burning of skin, especially in the presence of moisture (e.g., sweat). Wash exposed area with large amounts of water. Seek medical attention immediately.

iii. Ingestion - This product can cause severe irritation or burning of gastrointestinal tract if swallowed. Do not induce vomiting. Seek medical attention immediately. Never give anything by mouth unless instructed to do so by medical personnel.

iv. Inhalation - This product can cause severe irritation of the respiratory system. Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped administer CPR.

b. Most Important Symptoms and Effects, both Acute and Delayed:

i. Irritation of skin, eyes, gastrointestinal tract, or respiratory tract. Long term exposure by inhalation may cause permanent damage. This product contains crystalline silica, which

has been classified by IARC as a Group 1 carcinogen when inhaled. Inhalation of silica may also cause a chronic lung disorder - silicosis.

- c. Indication of Any Immediate Medical Attention and Special Treatment Needed:
 - i. See first aid information above. Note to physicians: Provide general supportive measures and treat symptomatically.

5. FIRE FIGHTING MEASURES

- a. Extinguishing Media:
 - i. 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 quicklime.
- b. Fire Hazards:
 - i. Quicklime is neither combustible nor flammable; however, quicklime reacts violently with water, and can release heat sufficient to ignite combustible materials. Quicklime is not considered to be an explosion hazard, although reaction with water or other incompatible materials may rupture containers. There are no hazardous combustion products.
- c. Special Protective Equipment and Fire Fighting Instructions:
 - i. Keep personnel away and upwind of fire. Wear full fire-fighting turn-out gear (full bunker gear), and respiratory protection (SCBA).

6. ACCIDENTAL RELEASE MEASURES

- a. Personal Precautions, Protective Equipment, and Emergency Procedures:
 - i. Spill/Leak Procedures: Do NOT use water on bulk material quicklime spills. Lime reacts violently with water, releasing heat. Use proper protective equipment including gloves, eye protection (goggles), and cover **all** exposed skin.
 - ii. Small Spills: Use dry methods to collect spilled materials. Evacuate area downwind of cleanup operations to minimize dust exposure
 - iii. Large Spills: Use dry methods to collect spilled materials. Evacuate area that is located downwind of cleanup operations to minimize dust exposure. Store spilled materials in dry, sealed plastic or metal (not aluminum) containers.
- b. Methods and Materials for Containment and Cleanup:
 - i. Containment: For large spills, as much as possible, avoid generation of dust. Prevent release to sewers and waterways.
 - ii. Cleanup: Residual amounts of material can be flushed with large amounts of water. Equipment can be washed with either a mild vinegar and water solution, or detergent and water.

7. HANDLING AND STORAGE

- a. Precautions for Safe Handling:
 - i. Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material.
- b. Conditions for Safe Storage, Including Incompatibilities:
 - i. Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials (See Section 10 below). Keep away from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

a. Exposure Limits:

Component	CAS#	Exposure Limits
Calcium Oxide	1305-78-8	OSHA PEL: 5 mg/m ³ ACGIH TLV: 2 mg/m ³
Magnesium Oxide	1309-48-4	OSHA PEL: 15 mg/m ³ ACGIH TLV: 10 mg/m ³
Crystalline Silica	14808-60-7	OSHA PEL: 10 mg/m ³ divided by (the percentage of silica in the dust plus 2) (respirable) ACGIH TLV: 0.025 mg/m ³

b. Engineering Controls:

- i. Provide ventilation adequate to maintain PELs

c. Individual Protection Measures

- i. Respiratory Protection: Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL.
- ii. Skin Protection: Use appropriate gloves and appropriate clothing including face protection to prevent skin contact.
- iii. Eye Protection: Use safety glasses with side shields or safety goggles. Contact lenses should not be worn when working with lime products.
- iv. Other: Eye wash fountain and emergency showers are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

- a. Appearance: White or Gray-white material
- b. Odor: Odorless
- c. Odor Threshold: N/A
- d. pH @ 25°C: 12.5
- e. Melting Point: ~4600°F, ~2500°C
- f. Flash Point: N/A
- g. Evaporation Rate: N/A
- h. Flammability: N/A
- i. Vapor Pressure: N/A
- j. Specific Gravity: 3.3 (approx.)
- k. Bulk Density: 56 - 67 lb./ft³ (approx.)
- l. Solubility in Water: Negligible but reacts with water to produce (Ca,Mg)(OH)₂ and heat.
- m. Auto-Ignition Temperature: N/A

10. STABILITY AND REACTIVITY

- a. Reactivity: Quicklime reacts violently with water to form the equivalent hydroxide, releasing heat. Contact with incompatible materials - especially powdered aluminum - and other Lewis Acids must be avoided. (See also Incompatibility below)
- b. Chemical Stability: Quicklime is chemically stable
- c. Possibility of Hazardous Reactions: Hazardous reactions involving quicklime include, but are not limited to, contact with Lewis Acids, contact with powdered aluminum which can result in an explosion, and contact with water which will release heat that is sufficient to inflict 3rd degree burns to human tissue. (See also Incompatibility below)
- d. Conditions to Avoid: Do not allow quicklime to come into contact with substances mentioned in 10(c) without taking appropriate precautions. Avoid exposure to lime dust. Avoid contact of quicklime with skin or eyes (User MUST wear suitable PPE).

- e. Incompatibility: Quicklime should not be mixed or stored with the following materials due to the potential for violent reactions and release of heat:
 - i. Water
 - ii. Acids
 - iii. Reactive fluorinated compounds
 - iv. Reactive brominated compounds
 - v. Reactive powdered metals (e.g., aluminum)
 - vi. Organic acid anhydrides
 - vii. Nitro - organic compounds
 - viii. Reactive phosphorous compounds
 - ix. Interhalogenated compounds
- f. Hazardous Decomposition Products: N/A

11. TOXICOLOGICAL INFORMATION

- a. Information on the Likely Routes of Exposure: See First Aid discussion above.
- b. Symptoms Related to Physical, Chemical and Toxicological Characteristics: See First Aid discussion above.
- c. Delayed and Immediate Effects and Also Chronic Effects From Exposure: See First Aid discussion above.
- d. Numerical Measures of Toxicity: No LD50/LC50 has been identified for this product's components.
- e. Carcinogen Listing: Quicklime is not listed by MSHA, OSHA, or IARC as a carcinogen; however, this product contains crystalline silica, which has been classified by IARC as a (Group 1) carcinogen to humans when inhaled.

12. ECOLOGICAL INFORMATION

- a. Ecotoxicity: Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems in moderate to high concentrations.
- b. Persistence and Degradability: Quicklime will revert to the hydroxide when exposed to moisture/humidity and then to the carbonate when exposed to air.
- c. Bio-accumulative Potential: This material exhibits no bio-accumulation effect or food chain concentration toxicity.
- d. Mobility in Soils: Soil mobility can vary widely based on soil properties and weather conditions
- e. Other Adverse Effects (Such as Being Hazardous to the Ozone Layer): The material is alkaline and, if released into water or moist soil, it will cause an increase in pH.

13. DISPOSAL CONSIDERATIONS

- a. Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product, as supplied and unmixed, becomes a waste, it will not meet the criteria for a hazardous waste as defined under RCRA.

14. TRANSPORTATION INFORMATION

- a. UN Number: UN1910
- b. UN Proper Shipping Name: Calcium Oxide
- c. Transport Hazard Class: When transported by air only: Hazard Class 8 - Corrosive
- d. Packing Group: When transported by air only: Packing Group III
- e. Environmental Hazards (e.g. Marine Pollutant): This material is alkaline and, if released into water or moist soil, an increase in pH will result.

- f. Transport in bulk (according to Annex II or MARPOL 73/79 and the IBC Code: Must comply with Annex III (solid in packaged form) or the IBC references to fire prevention in construction. See appropriate sections relating to reactions of quicklime.
- g. Special Precautions Which a User Needs to be Aware of , or Needs to Comply With, in Connection with Transport and Conveyance Either Within or Outside Their Premises:
 - i. When being transported by air, quicklime is classified in the Department of Transportation (DOT) regulations as a hazardous material (49 CFR 172.101). For aircraft transport only, quicklime is classified as Hazard Class 8 - Corrosive, UN 1910, Packing Group III. For passenger aircraft, the maximum net quantity allowed per container is 25KG. For cargo aircraft, the maximum net quantity allowed per container is 100KG. For quantities greater than 25KG up to and including 100KG, the container shall be labeled with "CARGO AIRCRAFT ONLY." Because express carriers (i.e., FedEx, Airborne Express, and UPS) ship by air, quicklime presented to these carriers for shipment must be packaged, marked, and labeled in accordance with IATA requirements, and must be accompanied by the appropriate shipping documentation. Only personnel trained and certified under applicable DOT Hazardous Materials Regulations (contained in Title 49 of the Code of Federal Regulations (CFR).may prepare any quicklime product for air transport. Quicklime is not classified as a hazardous material by DOT when transported by means other than by air. When shipping by air, do no pack in aluminum container.

15. REGULATORY INFORMATION

- a. EPA Regulations:
 - i. RCRA Hazardous Waste Number: Not listed in 40 CFR 261.33
 - ii. RCRA Hazardous Waste Classification: Not classified in 40 CFR 261
 - iii. CERCLA Hazardous Substance (40 CFR 302.4): Unlisted specific per RCRA, sec. 3001; CWA, Section 311 (b)(4); CWA, Section 307(a), CAA, Section 112
 - iv. CERCLA Reportable Quantity (RQ): Not Listed
 - v. SARA 311/312 Codes: Not Listed
 - vi. SARA Toxic Chemical (40 CFR 372.65): Not Listed
 - vii. SARA EHS (Extremely Hazardous Substance) (40 CFR 355); Not Listed
 - viii. Threshold Planning Quantity (TPQ): Not Listed
 - ix. All chemical ingredients are listed on the USEPA TSCA Inventory List
- b. OSHA/MSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1a) 5 mg/M3 TWA-8, MSHA: Not Listed; OSHA Specifically Regulated Substance (29 CFR 1910) not listed
- c. State Regulations: Consult state and local authorities for guidance.
- d. HMIS: Health Risks 3, Flammability 0, Reactivity 1, Personal Protection E
- e. NFPA: Health Hazard 3, Fire Hazard 0, Reactivity 1
- f. WHMIS Classification: "E" Corrosive Materials (listed due to corrosive effect on aluminum)
- g. WHMIS Classification: "D2A" Materials causing other toxic effects

16. OTHER INFORMATION

- a. Version: Original/Version 0
- b. Date: 3/11/2015
By: Oldcastle Lawn & Garden, Inc.
For: Oldcastle Lawn & Garden, Inc 413-243-0053
- c. N.B. This product should only be used by knowledgeable persons. While the information provided in this Safety Data Sheet is believed to provide a useful summary of the hazards, this product, as it is commonly used, 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. SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Oldcastle® Lawn & Garden, Inc. except that the

product shall conform to contracted specifications. The information provided herein is believed by Oldcastle® to be accurate at the time of preparation. This SDS is prepared from sources believed to be reliable; however, 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 this 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 with respect to 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.