

Section 1: IDENTIFICATION

Product Name: Spent Lime Sludge

Synonyms: Calcium carbonate; Calcium hydrate; Carbide lime; Generator slurry; Lime cake; Lime hydrate; Lime sludge; Lime slurry; Lime water; Slaked lime.

Product Use: Waste stream.

Restrictions on Use: Not available.

Manufacturer/Supplier: Devon Canada Corporation
2000, 400 – 3 Ave S.W.
Calgary, AB
T2P 4H2

Phone Number: (403) 232-7100

Emergency Phone: (403) 232-7100
Canutec Transport Emergency # (613) 996-6666

Date of Preparation of SDS: September 22, 2015

Section 2: HAZARD(S) IDENTIFICATION**GHS INFORMATION**

Classification: Skin Irritation, Category 2
Eye Damage, Category 1

LABEL ELEMENTS**Hazard****Pictogram(s):****Signal Word:** Danger

Hazard Statements: Causes skin irritation.
Causes serious eye damage.

Precautionary Statements

Prevention: Wash thoroughly after handling.
Wear protective gloves, protective clothing and eye protection.

Response: IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.

Storage: Not applicable.

Disposal: Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 10% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

This material is considered hazardous by the Hazardous Products Regulations, 2015.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Carbonic acid calcium salt (1:1)	Calcium carbonate	471-34-1	60 - 100
Calcium hydroxide (Ca(OH) ₂)	Not available.	1305-62-0	1 - 10
Magnesium oxide (MgO)	Not available.	1309-48-4	1 - 10
Petroleum	Not available.	8002-05-9	0.1 - 1

Section 4: FIRST-AID MEASURES

Inhalation: If inhaled: Call a poison center or doctor if you feel unwell.
Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Inhalation of Calcium hydroxide can cause chemical bronchitis. Inhalation of Magnesium oxide can cause metal fume fever, a 24- to 48-hour flu-like illness characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache.

Eye Contact: If in eyes: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
Acute and delayed symptoms and effects: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision. Eye contact with Calcium hydroxide may induce ulcerations of the corneal epithelium and may cause blindness.

Skin Contact: If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Acute and delayed symptoms and effects: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Ingestion of Calcium hydroxide may be followed by severe pain, vomiting, diarrhea, and collapse.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Not flammable or combustible by OSHA/WHMIS criteria.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is not sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Small Fire: Dry chemical, CO₂, water spray or regular foam.

Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of carbon. Aldehydes. Oxides of calcium.

Protection of Firefighters: Runoff from fire control or dilution water may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Personal Precautions: Do not touch or walk through spilled material. Use personal protection recommended in Section 8.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways.

Methods for Containment: Stop leak if without risk. Do not flush to sewer or allow to enter waterways.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:

Do not swallow. Avoid any contact with skin, eyes and clothing. Wash thoroughly after handling. See Section 8 for information on Personal Protective Equipment.

Storage:

Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component

Calcium carbonate [CAS No. 471-34-1]

ACGIH: No TLV established.

OSHA: No PEL established.

Calcium hydroxide [CAS No. 1305-62-0]

ACGIH: 5 mg/m³ (TWA); (1979)

OSHA: 15 mg/m³ (Total dust) (TWA), 5 mg/m³ (Respirable fraction) (TWA);
5 mg/m³ (TWA) [Vacated];

Magnesium oxide [CAS No. 1309-48-4]

ACGIH: 10 mg/m³ (TWA); A4; Inhalable fraction (2000)

OSHA: 15 mg/m³ (Total particulate, fume) (TWA);
10 mg/m³ (Total dust) (TWA) [Vacated];

Petroleum [CAS No. 8002-05-9]

ACGIH: No TLV established.

OSHA: 500 ppm (TWA), 2000 mg/m³ (TWA);
400 ppm (TWA) [Vacated];

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Eye/Face Protection:

Wear chemical safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

Hand Protection:

Wear protective gloves. Consult manufacturer specifications for further information.

Skin and Body Protection:

Wear protective clothing.

Respiratory Protection:

If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

General Hygiene Considerations:

Handle according to established industrial hygiene and safety practices. Consult a competent industrial hygienist to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid slurry, moist cake.
Colour:	Grey to white.
Odour:	Odourless to slight hydrocarbon.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	10 to 11.5
Melting Point / Freezing Point:	825 °C (1517 °F) (Calcium carbonate)
Initial Boiling Point:	Not available.
Boiling Range:	Dissociates at 580 °C (1076 °F)
Flash Point:	Not available.
Evaporation Rate:	Nil.
Flammability (solid, gas):	Not applicable.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	0 mmHg at 20 °C (68 °F)
Vapor Density:	Not available.
Relative Density:	1.34 (Water = 1)
Solubilities:	Not available.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.



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Percent Volatile, wt. %: Negligible.
 VOC content, wt. %: Not available.
 Density: Not available.
 Coefficient of Water/Oil Distribution: Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity: Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability: Stable under normal storage conditions.
Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials: Acids. Oxidizers. Aluminum. Halogens. Phosphorus. Ammonium salts. Maleic anhydride. Nitroethane. Nitromethane. Nitroparaffins. Nitropropane.
Hazardous Decomposition Products: Not available.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral: Not available.
Dermal: Not available.
Inhalation: Not available.

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Calcium carbonate	471-34-1	6450 mg/kg (rat)	Not available.	Not available.
Calcium hydroxide	1305-62-0	7300 mg/kg (mouse)	Not available.	Not available.
Magnesium oxide	1309-48-4	Not available.	Not available.	Not available.
Petroleum	8002-05-9	4300 mg/kg (rat)	Not available.	Not available.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Bone marrow. Liver. Reproductive system. Central nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Inhalation of Calcium hydroxide can cause chemical bronchitis. Inhalation of Magnesium oxide can cause metal fume fever, a 24- to 48-hour flu-like illness characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache.



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Eye: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision. Eye contact with Calcium hydroxide may induce ulcerations of the corneal epithelium and may cause blindness.

Skin: Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea. Ingestion of Calcium hydroxide may be followed by severe pain, vomiting, diarrhea, and collapse.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Blood. Bone marrow. Liver. Reproductive system. Central nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation. Lungs may be affected by repeated or prolonged exposure to Calcium hydroxide dust particles. Repeated dermal application of crude oils in rats produced systemic toxicity in blood, liver, thymus and bone marrow.

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components. Lifetime skin painting studies in animals with whole crude oils and crude oil fractions have produced tumours in animals following prolonged and repeated skin contact.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Magnesium oxide	A4	Not listed.	Not listed.	Not listed.	Not listed.
Petroleum	Not listed.	Group 3	Not listed.	OSHA Carcinogen.	Not listed.

Mutagenicity: Not available.

Reproductive Effects: Studies exist which report a link to crude oil and reproductive effects including menstrual disorders.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Repeated dermal application of crude oils to pregnant rats produced maternal toxicity and fetal developmental toxicity and fetal tumours.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Petroleum: 21 and 41 mg/l, 96 hr., Rainbow trout; 2.7 and 4.1 mg/l, 96 hr., Mysid; 122 and 528 ml/kg, 96 hr., Algae.
Persistence / Degradability:	Not available.
Bioaccumulation / Accumulation:	Not available.
Mobility in Environment:	Not available.
Other Adverse Effects:	Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION**U.S. Department of Transportation (DOT)**

Proper Shipping Name:	Not regulated.
Class:	Not applicable.
UN Number:	Not applicable.
Packing Group:	Not applicable.
Label Code:	Not applicable.

Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name:	Not regulated.
Class:	Not applicable.
UN Number:	Not applicable.
Packing Group:	Not applicable.
Label Code:	Not applicable.

Section 15: REGULATORY INFORMATION**Chemical Inventories****US (TSCA)**

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations**United States**

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.



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SARA Title III

No components are listed.

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Calcium carbonate	471-34-1	Listed.
Calcium hydroxide	1305-62-0	Listed.
Magnesium oxide	1309-48-4	Listed.
Petroleum	8002-05-9	Listed.

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Calcium hydroxide	1305-62-0	Listed.
Magnesium oxide	1309-48-4	Listed.
Petroleum	8002-05-9	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Calcium carbonate	471-34-1	Listed.
Calcium hydroxide	1305-62-0	Listed.
Magnesium oxide	1309-48-4	Listed.
Petroleum	8002-05-9	Listed.

California

California Prop 65: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Component	Type of Toxicity
Benzene	cancer; developmental, male
Toluene	developmental
Ethylbenzene	cancer

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for their own particular use.

Date of Preparation of SDS: September 22, 2015

Version: 1.0

GHS SDS Prepared by: Deerfoot Consulting Inc.

Phone: (403) 720-3700