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Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product name DEE LIME

Product use Descalant

Product code 2341

Date of issue 02/10/10 **Supersedes** 05/23/07

Emergency Telephone Numbers

For MSDS Information:
Technical Services Group
Telephone (780) 453-8100
(Business Hours 8:00am - 5:00pm)

For Medical or Transportation Emergency
CANUTEC (24 Hours)
(613) 996-6666 - Call Collect

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Prepared By
Technical Services Group
11627 178th Street
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Section 2. Hazards Identification

Emergency overview

CAUTION

Corrosive

Avoid prolonged contact with eyes, skin and clothing.

NOTE: MSDS data pertains to the product as delivered in the original shipping container(s). Risk of adverse effects are lessened by following all prescribed safety precautions, including the use of proper personal protective equipment.

Acute Effects **Routes of Entry** Skin contact Eye contact. Inhalation.

Eyes Severely corrosive to the eyes. Causes severe burns. Eye contact can result in corneal damage or blindness.

Skin Severely corrosive to the skin. Causes severe burns.

Inhalation Harmful by inhalation. Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath.

Ingestion May cause burns to mouth, throat and stomach. May be fatal if swallowed.

Chronic effects Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray or mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Additional Information: See Toxicological Information (Section 11)

Section 3. Composition/Information on Ingredients

Name of Hazardous Ingredients	CAS number	% by Weight
PHOSPHORIC ACID	7664-38-2	15 - 40
Nitric acid	7697-37-2	5 - 10

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention.

Ingestion Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Section 5. Fire Fighting Measures

Flash Point Not available.

Flammable Limits Not available.

Flammability Non-combustible.

Auto-ignition Temperature Not applicable

Fire-Fighting Procedures Use an extinguishing agent suitable for the surrounding fire. Fire-fighters should wear appropriate protective equipment.

Fire hazard In a fire or if heated, a pressure increase will occur and the container may burst.

Products of Combustion May emit toxic fumes under fire conditions. Carbon dioxide (CO_2). and nitrogen oxides (NO, NO_2 etc.)

Explosion hazard Not available.

Section 6. Accidental Release Measures

Spill Clean up Put on appropriate personal protective equipment (see section 8). Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Handling Put on appropriate personal protective equipment (see section 8). Do not get in eyes or on skin or clothing. Avoid breathing vapors, spray or mists. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Wash thoroughly after handling.

Storage Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Product name	Exposure limits
Phosphoric Acid	**ACGIH / OSHA (United States).** TWA: 1 mg/m³ 8 hour(s). **ACGIH TLV (United States).** STEL: 3 mg/m³ 15 minute(s).
Nitric Acid	**ACGIH TLV (United States).** STEL: 4 ppm TWA: 2 ppm **OSHA PEL (United States).** TWA: 5 mg/m³ TWA: 2 ppm STEL: 4 ppm STEL: 10 mg/m³

Personal Protective Equipment (PPE)

Eyes Splash goggles. Face shield.

Hands and Body Chemical-resistant gloves. Nitrile Neoprene Rubber. Chemical-resistant apron.

Respiratory Use with adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Wear appropriate respirator when ventilation is inadequate. Approved/certified respirator with acid gas cartridge.

Section 9. Physical and Chemical Properties

Physical State Liquid.

pH < 1.5

Boiling Point 110°C (230°F)

Specific Gravity 1.235

Solubility Easily soluble in the following materials: cold water and hot water.

Freezing Point -10°C (14°F)

Color Clear. Amber.

Odor Sweet.

Vapor Pressure Not available.

Vapor Density Not available.

Evaporation Rate 0.75 (Water = 1)

VOC (Consumer) 0 % (w/w) [ISO 11890-1]

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Incompatibility Reactive or incompatible with the following materials: oxidizing materials and alkalis.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

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

Section 11. Toxicological Information

Carcinogenicity Ingredients: Not listed as carcinogen by OSHA, NTP or IARC.

Acute Toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phosphoric Acid	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-
Nitric Acid	LC50 Inhalation Vapor	Rat	7 mg/L	4 hours

Section 12. Ecological Information

Environmental Effects No known significant effects or critical hazards.

Aquatic Ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Phosphoric Acid	-	Acute LC50 138 mg/L	Fish	96 hours

Section 13. Disposal Considerations

Waste Information

Waste must be disposed of in accordance with applicable regulations. Consult your local or regional authorities for additional information.

Waste Stream Code: No additional information.

Section 14. Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	1760	Corrosive liquids, n.o.s. (Phosphoric Acid, Nitric Acid)	8	II		**Explosive Limit and Limited Quantity Index** 1
IMDG Class	Not available.	Not available.	Not available.	-		-

NOTE: DOT classification applies to most package sizes. For specific container size classifications or for size exceptions, refer to the Bill of Lading with your shipment. Limited Quantity: Small quantities of controlled goods are not regulated as Dangerous Goods according to TDG regulations.

PG* : Packing group

Section 15. Regulatory Information

Canada

WHMIS (Canada) Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class E: Corrosive material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16. Other Information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.