EC®LAB°,	SAFETY DATA SHEET
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SECTION 1. PRODUCT AND	D COMPANY IDENTIFICATION
Product name	: LIME-A-WAY
Other means of identification	: Not applicable
Recommended use	: Delimer
Restrictions on use	: Reserved for industrial and professional use.
Product dilution information	: 0.8 % - 4.0 %
Company	: Ecolab Inc. 370 N. Wabasha Street St. Paul, Minnesota USA 55102 1-800-352-5326
Emergency health information	: 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)
Issuing date	: 06/02/2016
SECTION 2. HAZARDS IDE	NTIFICATION
GHS Classification	
Product AS SOLD Skin corrosion Serious eye damage	: Category 1A : Category 1
Product AT USE DILUTION Skin corrosion Serious eye damage	: Category 1A
GHS label elements	
Product AS SOLD Hazard pictograms	
Signal Word	: Danger
Hazard Statements	: Causes severe skin burns and eye damage.
Precautionary Statements	 Prevention: Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection. Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 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/doctor. Wash contaminated clothing before reuse.

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	Storage:		
	Store locked up.		
	Disposal: Dispose of conte	ents/ container to an a	oproved waste disposal plant.
Product AT USE DILUTION Hazard pictograms			
Signal Word	: Danger		
		1.7. 6	
Hazard Statements Precautionary Statements	: Causes severe :	skin burns and eye dar	nage.
	protective clothin Response: IF SWALLOWE (or hair): Take o with water/show comfortable for CENTER/doctor minutes. Remov rinsing. Immedia contaminated cl Storage: Store locked up Disposal:	ng/ eye protection/ fac D: Rinse mouth. Do NG ff immediately all conta er. IF INHALED: Remo preathing. Immediately IF IN EYES: Rinse ca e contact lenses, if pro ately call a POISON CI othing before reuse.	DT induce vomiting. IF ON SKIN aminated clothing. Rinse skin ove person to fresh air and keep call a POISON autiously with water for several esent and easy to do. Continue
Product AS SOLD Other hazards	: Do not mix with chlorine gas.	bleach or other chlorin	ated products – will cause
SECTION 3. COMPOSITION/I	NFORMATION ON	INGREDIENTS	
	: Mixture		
Pure substance/mixture Chemical name nitric acid	: Mixture	CAS-No. 7697-37-2 77-92-9	Concentration (%) 10 - 30 1 - 5
Pure substance/mixture Chemical name nitric acid citric acid	: Mixture	7697-37-2	10 - 30
Pure substance/mixture Chemical name nitric acid citric acid Product AT USE DILUTION	: Mixture	7697-37-2	10 - 30
Pure substance/mixture Chemical name nitric acid citric acid Product AT USE DILUTION No hazardous ingredients		7697-37-2	10 - 30
Product AS SOLD Pure substance/mixture Chemical name nitric acid citric acid Product AT USE DILUTION No hazardous ingredients SECTION 4. FIRST AID MEAS Product AS SOLD In case of eye contact	SURES : Rinse immediat least 15 minutes	7697-37-2 77-92-9	10 - 30 1 - 5

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		shoes before reuse. Get medical attention immediately.
If swallowed	:	Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	:	Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
Protection of first-aiders	:	If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.
Product AT USE DILUTION In case of eye contact		Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	•	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed		Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled		Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

SECTION 5. FIRE-FIGHTING MEASURES

Product AS SOLD Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus
Special protective equipment for fire-fighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.
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SECTION 6. ACCIDENTAL RELEASE MEASURES

Product AS SOLD Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non- combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.
Product AT USE DILUTION		
Personal precautions, protective equipment and emergency procedures		Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions		Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up		Stop leak if safe to do so. Contain spillage, and then collect with non- combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Product AS SOLD Advice on safe handling	: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling. Do not mix with bleach or other chlorinated products – will cause chlorine gas.
Conditions for safe storage	: Keep away from strong bases. Keep out of reach of children. Store in suitable labeled containers.
Storage temperature	: 0 °C to 50 °C
Product AT USE DILUTION	
Advice on safe handling	: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage	; Keep out of reach of children. Store in suitable labeled containers.
SECTION 8. EXPOSURE CO	NTROLS/PERSONAL PROTECTION

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Ingredients with workplace control parameters

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
nitric acid	7697-37-2	TWA	2 ppm	ACGIH
		STEL	4 ppm	ACGIH
		STEL	4 ppm 10 mg/m3	NIOSH REL
		TWA	2 ppm 5 mg/m3	NIOSH REL
		TWA	2 ppm 5 mg/m3	OSHA Z1

Engineering measures

: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Wear eye protection/ face protection.
Hand protection	;	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.
Product AT USE DILUTION	633	
Engineering measures		Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.
Personal protective equipme	nt	
Eye protection		Wear eye protection/ face protection.
Hand protection		Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	•	Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing
Respiratory protection		When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD Product AT U	SE DILUTION
Appearance	Aqueous solution liquid	
Color	clear, green green	
Odor	odorless odorless	
рН	0.5, 100 % 1.21 - 2.06	
Flash point	Not applicable	an a
Odor Threshold	No data available	
Melting point/freezing point	No data available	
Initial boiling point and boiling range	100 ℃	
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	
Upper explosion limit	No data available	
Lower explosion limit	No data available	
Vapor pressure	No data available	
Relative vapor density	No data available	
Relative density	1.04 - 1.12	
Water solubility	No data available	
Solubility in other solvents	No data available	
Partition coefficient: n- octanol/water	No data available	
Autoignition temperature	No data available	
Thermal decomposition	No data available	
Viscosity, kinematic	No data available	
Explosive properties	No data available	
Oxidizing properties	The substance or mixture is not classified as oxidiz	zing.
Molecular weight	No data available	
VOC	No data available	

SECTION 10. STABILITY AND REACTIVITY

Product AS SOLD Chemical stability	: Stable under normal conditions.	
Possibility of hazardous reactions	: Do not mix with bleach or other chlorinated products - will cause chlorine gas.	
Conditions to avoid	: None known.	
Incompatible materials	: Bases	
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides Nitrogen oxides (NOx)	

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Sulfur oxides Oxides of phosphorus

SECTION 11. TOXICOLOGIC	
······································	: Inhalation, Eye contact, Skin contact
Potential Health Effects	
Product AS SOLD Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.
Product AT USE DILUTION Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.
Experience with human expo	osure
Product AS SOLD Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough
Product AT USE DILUTION Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough
Toxicity	
Product AS SOLD Product Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg

: No data available

Acute inhalation toxicity

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Acute dermal toxicity	: Acute toxicity estimate : > 5,000 mg/kg	
Skin corrosion/irritation	: No data available	
Serious eye damage/eye irritation	: No data available	
Respiratory or skin sensitization	: No data available	
Carcinogenicity	: No data available	
Reproductive effects	: No data available	
Germ cell mutagenicity	: No data available	
Teratogenicity	: No data available	
STOT-single exposure	: No data available	
STOT-repeated exposure	: No data available	
Aspiration toxicity	: No data available	

SECTION 12. ECOLOGICAL INFORMATION

Product AS SOLD Ecotoxicity		
Environmental Effects	:	This product has no known ecotoxicological effects.
Product		
Toxicity to fish	:	No data available
Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available
Ingredients		
Toxicity to fish	:	nitric acid 96 h LC50: 72 mg/l
		citric acid 96 h LC50 Fish: > 100 mg/l
Persistence and degradability	y	
Product AS SOLD Readily biodegradable.		
Product AT USE DILUTION Readily blodegradable.		
Bioaccumulative potential		
No data available		
Mobility in soil		
No data available		
Other adverse effects		
Na data availabla		

No data available

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SECTION 13. DISPOSAL CO	ISIDERATIONS
Product AS SOLD Disposal methods	: Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re- use empty containers. Dispose of in accordance with local, state, and federal regulations.
RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste	: D002 (Corrosive)
Product AT USE DILUTION Disposal methods	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	: Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re- use empty containers. Dispose of in accordance with local, state, and federal regulations.

SECTION 14. TRANSPORT INFORMATION

Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

UN number	:	2031
Description of the goods	:	Nitric acid
Class	:	8
Packing group	:	11
Environmentally hazardous	:	no
Sea transport (IMDG/IMO)		
UN number	:	2031
Description of the goods	:	NITRIC ACID
Class	:	8

Packing group : 11 Marine pollutant : no

SECTION 15. REGULATORY INFORMATION

Product AS SOLD

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ	
			(lbs)	
nitric acid	7697-37-2	1000	9950	

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SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)		
nitric acid	7697-37-2	1000	9950		
SARA 311/312 Hazards	: Acute Health Haz	Acute Health Hazard			
SARA 302		The following components are subject to reporting levels established by SARA Title III, Section 302:			
	nitric acid	7697-37-2	10.05 %		
SARA 313	: The following com by SARA Title III,	rting levels established			
	nitric acid	7697-37-2	10.05 %		

California Prop 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

United States TSCA Inventory :

On TSCA Inventory

Canadian Domestic Substances List (DSL) :

This product contains one or several components listed in the Canadian NDSL.

Australia Inventory of Chemical Substances (AICS) :

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemical Substances :

On the inventory, or in compliance with the inventory

Japan. ENCS - Existing and New Chemical Substances Inventory :

On the inventory, or in compliance with the inventory

Japan. ISHL - Inventory of Chemical Substances (METI) :

On the inventory, or in compliance with the inventory

Korea. Korean Existing Chemicals Inventory (KECI) :

On the inventory, or in compliance with the inventory

Philippines Inventory of Chemicals and Chemical Substances (PICCS) :

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances in China (IECSC) :

On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Product AS SOLD

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Order#:FL3WL/00 Carrier:21W08/080

SAFETY DATA SHEET



Issuing date	:	06/02/2016
Version	:	1.7
Prepared by	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.