

**BARamine®**

Version 1.0

MSDS Number: 000000014060

Revision Date: 2015.05.20

**SECTION 1. IDENTIFICATION**

Commercial Product Name : BARamine®  
Product name : BARamine®  
Product code : 000000014060

**Manufacturer or supplier's details**

Company : **Lonza Inc.**  
90 Boroline Road  
Allendale, NJ 07401  
USA  
Business Telephone 1-201-316-9200

**Lonza Inc.**  
1200 Bluegrass Lakes Pkwy  
Alpharetta, GA 30004  
USA  
Business Telephone 1-678-624-5800

E-mail address : prodinfo@lonza.com  
Emergency telephone number : +41 61 313 94 94 (24h )  
For US only CHEMTREC 1-800-424-9300

**Recommended use of the chemical and restrictions on use**

Recommended use : Biocides

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Flammable liquids : Category 4  
Acute toxicity (Oral) : Category 3  
Skin corrosion : Category 1B  
Serious eye damage : Category 1  
Specific target organ toxicity -  
single exposure : Category 2

**GHS Label element**

Hazard pictograms :



Signal word : Danger

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- Hazard statements : H227 Combustible liquid.  
H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H371 May cause damage to organs.
- Precautionary statements : **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.  
P305 + P351 + P338 + P310 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/ physician.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/ physician.  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS****Hazardous components**

Chemical Name	CAS-No.	Concentration (%)
N,N-Dialkyl-N-methylamine (CAS No. Proprietary)	Not Assigned	2.00
Methanol	67-56-1	3.00
Glycerol	56-81-5	9.00
Water	7732-18-5	36.00

**SECTION 4. FIRST AID MEASURES**

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- If inhaled : Move to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Give oxygen.  
First aider needs to protect himself.  
Call a physician immediately.
- In case of skin contact : Take off all contaminated clothing immediately.  
After contact with skin, wash immediately with plenty of soap and water.  
Call a physician immediately.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Call a physician immediately.
- If swallowed : Call a physician immediately.  
Clean mouth with water and drink afterwards plenty of water.  
Do not induce vomiting without medical advice.  
Never give anything by mouth to an unconscious person.
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**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Dry powder  
Water spray  
Foam
- Specific hazards during firefighting : Heating or fire can release toxic gas.
- Further information : Use water spray to cool unopened containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use respirator when performing operations involving potential exposure to vapour of the product.
- Environmental precautions
- General advice : Do not flush into surface water or sanitary sewer system.
- Methods and materials for containment and cleaning up : 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).
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**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : Avoid contact with skin and eyes.  
Provide sufficient air exchange and/or exhaust in work rooms.

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Conditions for safe storage : Keep container tightly closed.  
To maintain product quality, do not store in heat or direct sunlight.  
Keep in a dry, cool and well-ventilated place.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		STEL	250 ppm 325 mg/m <sup>3</sup>	NIOSH/GUIDE
		REL	200 ppm 260 mg/m <sup>3</sup>	NIOSH/GUIDE
		PEL	200 ppm 260 mg/m <sup>3</sup>	OSHA_TRANS
		TWA	200 ppm 260 mg/m <sup>3</sup>	Z1A
		STEL	250 ppm 325 mg/m <sup>3</sup>	Z1A
		STEL	250 ppm	CAD ON OEL
		TWA	200 ppm	CAD ON OEL
		Glycerol	56-81-5	PEL (Total dust.)
PEL (Respirable fraction.)	5 mg/m <sup>3</sup>			OSHA_TRANS
TWA (Respirable fraction.)	5 mg/m <sup>3</sup>			Z1A
TWA (Total dust.)	10 mg/m <sup>3</sup>			Z1A
TWA (Mist.)	10 mg/m <sup>3</sup>			CAD ON OEL

## Appropriate engineering controls

## Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

## Hand protection

Material : Nitrile rubber  
Rate of permeability : > 480 min

## Eye protection

: Tightly fitting safety goggles  
Face-shield

## Skin and body protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Rubber or plastic apron  
Rubber or plastic boots

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Hygiene measures : Wash hands before breaks and immediately after handling the product.  
Avoid contact with skin, eyes and clothing.  
Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : light yellow

Odour : slight, amine-like

Odour Threshold : no data available

pH : 9 - 11

Melting point/range : -10 °C

Boiling point/boiling range : no data available

Flash point : 76 °C  
Method: Tagliabue C.C.  
Does not sustain combustion according to ASTM 4206

Evaporation rate : no data available

Upper explosion limit : no data available

Lower explosion limit : no data available

Vapour pressure : no data available

Relative vapour density : no data available

Relative density : no data available

Density : 0.96 g/cm<sup>3</sup> (25 °C)

Solubility(ies)  
Water solubility : soluble

Partition coefficient: n-octanol/water : no data available

Auto-ignition temperature : no data available

Decomposition temperature : no data available

Viscosity  
Viscosity, dynamic : 350 mPa.s (21 °C)

Viscosity, kinematic : no data available

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**SECTION 10. STABILITY AND REACTIVITY**

Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	no data available
Incompatible materials	:	Strong oxidizing agents Reducing agents
Hazardous decomposition products	:	Nitrogen oxides (NOx) Carbon oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure	:	Skin Eyes Ingestion Inhalation
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**Further information**

Remarks: Information given is based on data on the components and the toxicology of similar products. No data is available on the product itself.

**The following toxicological data refer to:****N,N-Didecyl-N,N-dimethylammonium carbonate (3:2)** (CAS-No.: 894406-76-9)**Acute toxicity**

Acute oral toxicity (LD50)	:	245 mg/kg Species: Rat Method: OECD Test Guideline 401 GLP: yes
Acute dermal toxicity (LD50)	:	> 2,000 mg/kg Species: Rat (male and female) Exposure time: 24 h Method: OECD Test Guideline 402 GLP: yes

**Skin corrosion/irritation**

Skin irritation	:	Corrosive Species: Rabbit Exposure time: 4 h Assessment: Causes burns. Method: OECD Test Guideline 404 GLP: yes Remarks: 50% solution
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**Serious eye damage/eye irritation**

Eye irritation	:	severe irritant Species: Rabbit
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**Respiratory or skin sensitisation**

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Sensitisation	: Test Type: Photoallergy Species: Guinea pig Method: US-EPA Result: not sensitizing GLP: yes
<b>Germ cell mutagenicity</b>	
Genotoxicity in vitro	: negative Ames test, Salmonella typhimurium Metabolic activation: yesMethod: OECD Test Guideline 471 GLP: yes
	negative Chromosome aberration test in vitro, Human lymphocytes Metabolic activation: yesMethod: OECD Test Guideline 473
	negative Gene mutation, mouse lymphoma cells Metabolic activation: yesMethod: OECD Test Guideline 476 GLP: yes
<b>Repeated dose toxicity</b>	: Species: Dog Application Route: Dietary Exposure time: 365 d Dose: 3 - 10 - 36 MG/KG/TAG Group: yes Method: OECD Test Guideline 452 GLP: yes Remarks: Data refer to N,N-Didecyl-N,N-dimethylammonium chloride.

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential****Components:****Methanol**

Partition coefficient: n-octanol/water : log Pow: -0.7

**Glycerol**

Partition coefficient: n-octanol/water : log Pow: -2.6

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**Mobility in soil**

no data available

**Other adverse effects**

Additional ecological information : Information given is based on data on the components and the ecotoxicology of similar products.

**The following ecotoxicological data refer to:****N,N-Didecyl-N,N-dimethylammonium carbonate (3:2)** (CAS-No.: 894406-76-9)**Ecotoxicity**

- Toxicity to fish (LC50) : 0.28 mg/l  
Species: *Lepomis macrochirus* (Bluegill sunfish)  
Acute toxicity  
Exposure time: 96 h  
Analytical monitoring: yes  
Method: US-EPA  
GLP: yes
- Toxicity to fish (LC50) : 1.1 mg/l  
Species: *Cyprinodon variegatus* (sheepshead minnow)  
Acute toxicity  
Exposure time: 96 h  
Analytical monitoring: yes  
Method: US-EPA  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates (EC50) : 0.066 mg/l  
Species: *Daphnia magna* (Water flea)  
Immobilization  
Exposure time: 48 h  
Analytical monitoring: yes  
Method: US-EPA  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates (LC50) : 0.073 mg/l  
Species: *Mysidopsis bahia*  
Acute toxicity  
Exposure time: 96 h  
Analytical monitoring: yes  
Method: US-EPA  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates (EC50) : 26 mg/l  
Chronic toxicity  
Exposure time: 10 d  
Analytical monitoring: yes  
Method: US-EPA  
GLP: yes



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Toxicity to daphnia and other aquatic invertebrates (EC50)	: 1,063 mg/l Species: Chironomus sp. Acute toxicity Exposure time: 10 d Analytical monitoring: yes Method: US-EPA GLP: yes
Toxicity to algae (EC50)	: 0.025 mg/l Species: algae Cell multiplication inhibition test Exposure time: 96 h Test Type: Cell multiplication inhibition test Analytical monitoring: yes Method: US-EPA
Toxicity to algae (ErC50)	0.0152 mg/l Species: Desmodesmus subspicatus (green algae) Cell multiplication inhibition test Exposure time: 72 h Test Type: Cell multiplication inhibition test Analytical monitoring: yes Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	: 10
Toxicity to bacteria (EC50)	: 51 mg/l  Species: activated sludge Respiration inhibition Exposure time: 3 h Test Type: Respiration inhibition Analytical monitoring: no Method: OECD Test Guideline 209 GLP: yes

**Persistence and degradability**

Biodegradability	: Test Type: CO2 Evolution Test Result: Readily biodegradable Biodegradation: 96 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes
Stability in water	: Method: EPA-FIFRA GLP: yes Remarks: Data refer to N,N-Didecyl-N,N-dimethylammonium chloride.

**Bioaccumulative potential**

no data available

**Mobility in soil**

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Distribution among environmental compartments : Adsorption/Soil  
Method: EPA-FIFRA  
Remarks: Data refer to N,N-Didecyl-N,N-dimethylammonium chloride.

**Other adverse effects**

no data available

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.  
Dispose of as unused product.

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**SECTION 14. TRANSPORT INFORMATION****IATA**

**UN number** : 3267  
**Proper shipping name** : Corrosive liquid, basic, organic, n.o.s.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Labels : 8  
**Environmental hazards** : no

**IMDG**

**UN number** : 3267  
**Proper shipping name** : Corrosive liquid, basic, organic, n.o.s.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Labels : 8  
EmS Number 1 : F-A  
EmS Number 2 : S-B  
**Environmental hazards** : Marine pollutant: yes

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**ADR**

**UN number** : 3267  
**Proper shipping name** : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Classification Code : C7  
Hazard Identification Number : 80  
Labels : 8  
**Environmental hazards** : no

**RID**

**UN number** : 3267  
**Proper shipping name** : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Classification Code : C7  
Hazard Identification Number : 80  
Labels : 8  
**Environmental hazards** : no

**DOT**

**UN number** : 3267  
**Proper shipping name** : Corrosive liquid, basic, organic, n.o.s.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Labels : 8  
Emergency Response Guidebook : 153  
Number  
**Environmental hazards** : no

**TDG**

**UN number** : 3267  
**Proper shipping name** : CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.  
(N,N-Didecyl-N,N-dimethylammonium carbonate)  
**Transport hazard class** : 8  
**Packing group** : III  
Labels : 8  
**Environmental hazards** : no

**Special precautions for user** : none

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not applicable

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**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act****SARA 311/312 Hazards** : Acute Health Hazard**SARA 302**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Glycerol 56-81-5 6 %

**US State Regulations****Massachusetts Right To Know**Methanol 67-56-1  
Glycerol 56-81-5**Pennsylvania Right To Know**Methanol 67-56-1  
Glycerol 56-81-5**New Jersey Right To Know**Methanol 67-56-1  
Glycerol 56-81-5**SECTION 16. OTHER INFORMATION**

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The information provided in this 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.