LIQUI-SHOCK

1. IDENTIFICATION

Product name : **LIQUI-SHOCK**

Product code : **30-13800**

Other means of identification : Not available.

Supplier : Clearwater
CP 25
Victoriaville, Québec
G6P 6S4

Manufacturer : Manufactured for:
Clearwater
C.P. 25
Victoriaville, Quebec
G6P 6S4

Identified uses : Consumer products: Pool & Spa water treatment product
This MSDS is provided as information only. This product is not WHMIS regulated. This product is regulated under CCCR regulation.

Uses advised against : Only use this product as directed. Read label before using. Do not use as bleaching agent.

Date of issue (YYYY-MM-DD) : **2017-01-19**

In case of emergency : Emergency phone: CANUTEC (613) 996-6666 (Collect calls accepted)

2. HAZARDS IDENTIFICATION

Information in this section only concerns the product as supplied. Contact your account manager to get more information on diluted form hazards identification.

Product Classification : **SKIN CORROSION - Category 1**
SERIOUS EYE DAMAGE - Category 1
Health Hazards Not Otherwise Classified - Category 1

Signal word : **Danger**

Hazard pictograms :

Hazard statements : Causes digestive tract burns.
May cause severe eye damage.
May cause severe skin burns.

Precautionary statements

General : Corrosive material. Handle with care. Read label before use. Keep out of reach of children.

Prevention : Wash hands thoroughly after handling. Specific protective equipment is suggested for this product. See section 8 for details.

Response : IF INHALED: Move person to fresh air and keep comfortable for breathing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Rinse with water. IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. In any case of exposure, get medical attention if symptoms appear or are severe.

Storage : Store in an appropriate location.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : No additional information.

Other hazards which do not result in classification : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

Ingredient name	CAS number	% (w/w)
sodium hypochlorite solution Cl active	7681-52-9	10 - 30

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of required first aid measures

Eye contact In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Skin contact Remove contaminated clothing and wash it before reuse. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Ingestion Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Get medical attention if symptoms occur.

Inhalation Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention if adverse health effects persist or are severe. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Eye contact Adverse symptoms may include the following:
pain
watering
redness

Skin contact Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion Adverse symptoms may include the following:
stomach pains

Inhalation Adverse symptoms may include the following:
respiratory tract irritation
coughing

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (Section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products Decomposition products may include the following materials:
halogenated compounds
metal oxide/oxides

Special fire-fighting procedures Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Initiate spill response procedures if required.

Personal protection Put on appropriate personal protective equipment (see Section 8).

Cleaning method Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.

Storage and Incompatibility Store in accordance with local regulations. Separate from acids. 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. Use appropriate containment to avoid environmental contamination. Keep out of reach of children. Store away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Ingredient name	Exposure limits
sodium hypochlorite solution Cl active	**AIHA WEEL (United States, 10/2011).** STEL: 2 mg/m^3 15 minutes.

Appropriate engineering controls If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Eye/face protection Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

Hands and Body protection It is suggested to wear chemical-reisitant gloves while using or handling this product.

Respiratory protection No specific protective equipment required under normal use conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid. [Transparent liquid.]	**pH**	12.3	**Flash point**	[Product does not sustain combustion.]
Color	Yellow.	**Relative density**	1.172	**Melting point**	Not available.
Odor	Chlorine	**Viscosity**	Not available.	**Boiling point**	Not available.
Odor threshold	Not available.	**Vapor pressure**	Not available.	**Fire point** :	Not available.
Solubility in water :	Not available.	**Vapor density** :	Not available.	**Evaporation rate** :	Not available.

Decomposition temperature : Not available.

Auto-ignition temperature : Not available.

Partition coefficient: n-octanol/ water : The product is much more soluble in water.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

10. STABILITY AND REACTIVITY

Reactivity No specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Incompatible materials Reactive or incompatible with acids.

Conditions to avoid No specific data.

Possibility of hazardous reactions May cause an exothermic reaction in presence of acids.

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

11. TOXICOLOGICAL INFORMATION

Route of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

	Potential acute health effects	Symptoms
Eye contact	May cause eye burn	Adverse symptoms may include the following: pain watering redness
Skin contact	May cause skin burns	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.	Adverse symptoms may include the following: stomach pains
Inhalation	Inhalation of vapors or mist may cause respiratory tract irritation.	Adverse symptoms may include the following: respiratory tract irritation coughing

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
sodium hypochlorite, solution	LC50 Inhalation Gas. LD50 Oral	Rat Rat	>10500 mg/m^3 8910 mg/kg	1 hours -

Information on toxicological effects

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Sensitization Not available.

Carcinogenicity No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
sodium hypochlorite solution Cl active	Acute EC50 46000 µg/l Marine water Acute EC50 0.04 ppm Fresh water Acute LC50 56400 to 77400 µg/l Marine water Acute LC50 70 µg/l Fresh water Chronic NOEC 10000 µg/l Marine water Chronic NOEC 0.1 ppm Fresh water	Algae - Gracilaria tenuistipitata Daphnia - Daphnia magna Crustaceans - Palaemonetes pugio Fish - Ictalurus punctatus - Fingerling Algae - Gracilaria tenuistipitata Fish - Cyprinus carpio - Young	4 days 48 hours 48 hours 96 hours 4 days 30 days

Persistence and degradability : Unknown **Bioaccumulative potential** : Unknown **Mobility in soil** : Unknown **Other adverse effects** : Unknown

13. DISPOSAL CONSIDERATIONS

Disposal methods Dispose content and container in accordance with local, regional and national regulation in force.

14. TRANSPORT INFORMATION

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	TDG Placard
TDG Classification	1791	Corrosive liquid N.O.S. (sodium hypochlorite, solution)	8	III	

Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark).

The marine pollutant mark is not required when transported by road or rail.

Special provisions
Limited quantity index 5L

Additional information See shipping documents for specific information on DOT, IMDG or IATA

15. REGULATORY INFORMATION

Canadian lists

Canadian NPRI None of the components are listed.

CEPA Toxic substances None of the components are listed.

Canada inventory At least one component is not listed.

International lists

United States All components are listed or exempted.

16. OTHER INFORMATION

Hazardous Material Information System (U.S.A.)

Health Hazard	3
Fire Hazard	0
Reactivity	0
Personal Protection	C

Date of issue/Date of revision (YYYY-MM-DD) : 2017-01-19

Prepared by : **Regulatory Affairs Department**
Clearwater
CP 25
Victoriaville, Québec
G6P 6S4

Notice to reader

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.

FOR-MULE

1. IDENTIFICATION

Product name : **FOR-MULE**

Product code : **30-13115**

Other means of identification : Not available.

Supplier : Clearwater
CP 25
Victoriaville, Québec
G6P 6S4

Manufacturer : Manufactured for:
Clearwater
C.P. 25
Victoriaville, Quebec
G6P 6S4

Identified uses : Consumer products: Pool and Spa Degreaser
This MSDS is provided as information only. This product is not WHMIS regulated. This product is regulated under CCCR regulation. Packaged as a consumer good.

Uses advised against : Only use this product as directed. Read label before using.

Date of issue (YYYY-MM-DD) : **2016-10-04**

In case of emergency : Emergency phone: CANUTEC (613) 996-6666 (Collect calls accepted)

2. HAZARDS IDENTIFICATION

Information in this section only concerns the product as supplied. Contact your account manager to get more information on diluted form hazards identification.

Product Classification : **Not classified.**

Signal word : **No signal word.**

Hazard statements : No specific hazard under normal use conditions.

Precautionary statements

General : Read label before use. Keep out of reach of children.

Prevention : No specific measure needed. See Section 8 for more information.

Response : No special mesure needed See section 4 for more informations.

Storage : No specific measure needed. See section 7 for more information on handling and storage.

Disposal : No specific measure needed. See section 13 for waste disposal information.

Supplemental label elements : No additional information.

Other hazards which do not result in classification : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

Ingredient name	CAS number	% (w/w)
Diallyl polymethyl ammonium chloride	26062-79-3	1 - 5

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of required first aid measures

Eye contact In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention.

Skin contact In case of irritation, rinse with water. Get medical attention if irritation persist.

Ingestion Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Inhalation Move victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Eye contact No specific symptoms under normal use conditions.

Skin contact No specific symptoms under normal use conditions.

Ingestion No specific symptoms under normal use conditions.

Inhalation No specific symptoms under normal use conditions.

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (Section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products No specific data.

Special fire-fighting procedures Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Initiate spill response procedures if required.

Personal protection Put on appropriate personal protective equipment (see Section 8).

Cleaning method Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.

Storage and Incompatibility Store in accordance with local regulations. 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. Use appropriate containment to avoid environmental contamination. Keep out of reach of children. Store away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

None.

Appropriate engineering controls Good general ventilation should be sufficient to control worker exposure to airborne contaminants that could arise from the use if this product.

Individual protection measures

Eye/face protection No specific protective equipment required under normal use conditions.

Hands and Body protection No specific protective equipment required under normal use conditions.

Respiratory protection No specific protective equipment required under normal use conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid. [Limpid liquid]	**pH**	7.25	**Flash point**	[Product does not sustain combustion.]
Color	Blue. [Dark]	**Relative density**	1.024	**Melting point**	Not available.
Odor	Fruity.	**Viscosity**	Not available.	**Boiling point**	Not available.
Odor threshold	Not available.	**Vapor pressure**	Not available.	**Fire point** :	Not available.
Solubility in water :	Not available.	**Vapor density** :	Not available.	**Evaporation rate** :	Not available.

Decomposition temperature : Not available.

Auto-ignition temperature : Not available.

Partition coefficient: n-octanol/water : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

10. STABILITY AND REACTIVITY

Reactivity No specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Incompatible materials No specific data.

Conditions to avoid No specific data.

Possibility of hazardous reactions Under normal conditions of storage and use, hazardous reactions will not occur.

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

11. TOXICOLOGICAL INFORMATION

Route of exposure Routes of entry not anticipated: Oral, Dermal, Inhalation.

	Potential acute health effects	Symptoms
Eye contact	No known significant effects or critical hazards.	No specific symptoms under normal use conditions.
Skin contact	No known significant effects or critical hazards.	No specific symptoms under normal use conditions.
Ingestion	No known significant effects or critical hazards.	No specific symptoms under normal use conditions.
Inhalation	No known significant effects or critical hazards.	No specific symptoms under normal use conditions.

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
Diallyl polymethyl ammonium chloride	LD50 Oral	Rat	3000 mg/kg	-

Information on toxicological effects

Mutagenicity No known significant effects or critical hazards.

Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Sensitization	Not available.
Carcinogenicity	No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
Diallyl polymethyl ammonium chloride	Acute LC50 0.57 mg/l Fresh water Acute LC50 16.3 mg/l Fresh water	Daphnia Fish	48 hours 96 hours

Persistence and degradability : Unknown **Bioaccumulative potential** : Unknown **Mobility in soil** : Unknown **Other adverse effects** : Unknown

13. DISPOSAL CONSIDERATIONS

Disposal methods Dispose content and container in accordance with local, regional and national regulation in force.

14. TRANSPORT INFORMATION

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	TDG Placard
TDG Classification	Not regulated.	-	-	-	

-

Additional information See shipping documents for specific information on DOT, IMDG or IATA

15. REGULATORY INFORMATION

Canadian lists

Canadian NPRI None of the components are listed.

CEPA Toxic substances None of the components are listed.

Canada inventory Not determined.

International lists

United States Not determined.

16. OTHER INFORMATION

Hazardous Material Information System (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	A

Date of issue/Date of revision (YYYY-MM-DD) : 2016-10-04

Prepared by : **Regulatory Affairs Department**

Clearwater
CP 25
Victoriaville, Québec
G6P 6S4

Notice to reader

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.

BLAST

1. IDENTIFICATION

Product name : **BLAST**

Product code : **30-13270**

Other means of identification : Not available.

Supplier : Clearwater
CP 25
Victoriaville, Québec
G6P 6S4

Manufacturer : Manufactured for:
Clearwater
C.P. 25
Victoriaville, Quebec
G6P 6S4

Identified uses : Consumer products: Cleaning solutions.
This MSDS is provided as information only. This product is not WHMIS regulated. This product is regulated under CCCR regulation. Packaged as a consumer good.

Uses advised against : Only use this product as directed. Read label before using.

Date of issue (YYYY-MM-DD) : **2016-12-12**

In case of emergency : Emergency phone: CANUTEC (613) 996-6666 (Collect calls accepted)

2. HAZARDS IDENTIFICATION

Information in this section only concerns the product as supplied. Contact your account manager to get more information on diluted form hazards identification.

Product Classification : **SKIN CORROSION - Category 1B**
SERIOUS EYE DAMAGE - Category 1

Signal word : **Danger**

Hazard pictograms :

Hazard statements : May cause severe eye damage.
May cause severe skin burns.

Precautionary statements

General : Corrosive material. Handle with care. Read label before use. Keep out of reach of children.

Prevention : Wash hands thoroughly after handling. Specific protective equipment is suggested for this product. See section 8 for details.

Response : IF INHALED: Move person to fresh air and keep comfortable for breathing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Rinse with water. IF IN EYES: Remove contact lenses, if present and easy to do. Continue rinsing. In any case of exposure, get medical attention if symptoms appear or are severe.

Storage : Store in an appropriate location.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements : No additional information.

Other hazards which do not result in classification : None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture : Mixture

Ingredient name	CAS number	% (w/w)
2-butoxyethanol	111-76-2	5 - 10
disodium metasilicate	6834-92-0	1 - 5
Benzene, 1,1-oxybis-tetrapropylene derivatives, sulfonated, sodium salts	119345-04-9	1 - 5

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

Description of required first aid measures

Eye contact In case of contact with eyes, flush with fresh water. Check for and remove any contact lenses. Continue rinsing. If irritation persists, get medical attention. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Skin contact Remove contaminated clothing and wash it before reuse. Chemical burns must be treated promptly by a physician. Get medical attention if blistering occurs or redness persists.

Ingestion Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Chemical burns must be treated promptly by a physician. Get medical attention if symptoms occur.

Inhalation Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention if adverse health effects persist or are severe. Maintain an open airway.

Most important symptoms/effects, acute and delayed

Eye contact Adverse symptoms may include the following:
pain
watering
redness

Skin contact Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion Adverse symptoms may include the following:
stomach pains

Inhalation Adverse symptoms may include the following:
respiratory tract irritation
coughing

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (Section 11)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
phosphorus oxides
metal oxide/oxides

Special fire-fighting procedures Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action should be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Initiate spill response procedures if required.

Personal protection Put on appropriate personal protective equipment (see Section 8).

Cleaning method Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See Section 8 for additional information on hygiene measures.

Storage and Incompatibility Store in accordance with local regulations. Separate from acids. 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. Use appropriate containment to avoid environmental contamination. Keep out of reach of children. Store away from incompatible materials (see Section 10).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Ingredient name	Exposure limits
2-butoxyethanol	**CA Alberta Provincial (Canada, 4/2009). Skin sensitizer.** 8 hrs OEL: 97 mg/m³ 8 hours. 8 hrs OEL: 20 ppm 8 hours. **CA British Columbia Provincial (Canada, 2/2015).** TWA: 20 ppm 8 hours. **CA Ontario Provincial (Canada, 1/2013). Absorbed through skin.** TWA: 20 ppm 8 hours. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 20 ppm 8 hours. TWAEV: 97 mg/m³ 8 hours.

Appropriate engineering controls If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Eye/face protection Continued or severe exposures might required to wear a face shield or chemical splash goggles. It is minimally suggested to wear safety glasses while using or handling this product.

Hands and Body protection No specific protective equipment required under normal use conditions. Prolonged or severe exposures might require to wear chemical-resistant gloves.

Respiratory protection No specific protective equipment required under normal use conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid. [Transparent liquid]	**pH**	12.5	**Flash point**	[Product does not sustain combustion.]
Color	Yellow.	**Relative density**	1.04	**Melting point**	Not available.
Odor	Characteristic.	**Viscosity**	Not available.	**Boiling point**	Not available.
Odor threshold	Not available.	**Vapor pressure**	Not available.	**Fire point** :	Not available.
Solubility in water :	Not available.	**Vapor density** :	Not available.	**Evaporation rate** :	Not available.

Decomposition temperature : Not available.

Auto-ignition temperature : Not available.

Partition coefficient: n-octanol/ water : The product is much more soluble in water.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

10. STABILITY AND REACTIVITY

Reactivity No specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Incompatible materials Reactive or incompatible with acids.

Conditions to avoid No specific data.

Possibility of hazardous reactions May cause an exothermic reaction in presence of acids.

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

11. TOXICOLOGICAL INFORMATION

Route of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

	Potential acute health effects	Symptoms
Eye contact	May cause eye burn	Adverse symptoms may include the following: pain watering redness
Skin contact	May cause skin burns	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion	May cause burns to mouth, throat and stomach.	Adverse symptoms may include the following: stomach pains
Inhalation	Inhalation of vapors or mist may cause respiratory tract irritation.	Adverse symptoms may include the following: respiratory tract irritation coughing

Toxicity data

Product/ingredient name	Result	Species	Dose	Exposure
2-butoxyethanol	LC50 Inhalation Gas.	Rat	450 ppm	4 hours
	LC50 Inhalation Vapor	Rat	700 ppm	7 hours
	LD50 Dermal	Rabbit	220 mg/kg	-
	LD50 Dermal	Rabbit	400 mg/kg	-
	LD50 Oral	Mouse	1230 mg/kg	-
	LD50 Oral	Rat	250 mg/kg	-
	LD50 Oral	Rat	560 mg/kg	-
disodium metasilicate	LD50 Oral	Mouse	770 mg/kg	-
	LD50 Oral	Rat	1153 mg/kg	-
Benzene, 1,1-oxybis-tetrapropylene derivatives, sulfonated, sodium salts	LD50 Oral	Rat	1976 mg/kg	-

Information on toxicological effects

Mutagenicity No known significant effects or critical hazards.

Teratogenicity No known significant effects or critical hazards.

Developmental effects No known significant effects or critical hazards.

Fertility effects No known significant effects or critical hazards.

Sensitization Not available.

Carcinogenicity No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity data

Product/ingredient name	Result	Species	Exposure
2-butoxyethanol	Acute EC50 >1000 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 to 1000000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1250000 µg/l Marine water	Fish - Menidia beryllina	96 hours
disodium metasilicate	Acute EC50 33.53 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 2320 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

Persistence and degradability : Unknown **Bioaccumulative potential** : Unknown **Mobility in soil** : Unknown **Other adverse effects** : Unknown

13. DISPOSAL CONSIDERATIONS

Disposal methods Dispose content and container in accordance with local, regional and national regulation in force.

14. TRANSPORT INFORMATION

	UN number	UN proper shipping name	Transport hazard class (es)	Packing group	TDG Placard
TDG Classification	1760	Corrosive liquids n.o.s. (disodium metasilicate)	8	III	

Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8).

Special provisions
Limited quantity index 5L

Additional information See shipping documents for specific information on DOT, IMDG or IATA

15. REGULATORY INFORMATION

Canadian lists

Canadian NPRI None of the components are listed.

CEPA Toxic substances None of the components are listed.

Canada inventory At least one component is not listed.

International lists

United States Not determined.

16. OTHER INFORMATION

Hazardous Material Information System (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	B

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Notice to reader

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.