Used Sodium Hydroxide

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 08/17/2018 Date of Issue: 09/08/2014 Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Used Sodium Hydroxide

Chemical Name: Sodium hydroxide

1.2. Intended Use of the Product

Production of alumina, removal of contaminants, recycled product, facilitate reduction/oxidation reactions, metals precipitation and neutralization reactions associated with chemical treatment processes.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Hydro Extrusion USA, LLC

6250 N. River Rd Suite, 5000

Rosemont, IL 60018

Phone: 847-939-2912

1.4. Emergency Telephone Number

Emergency Number : USA: Chemtrec: 1-800-424-9300 or 1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Met. Corr. 1	H290
Acute Tox. 4 (Oral)	H302
Skin Corr. 1A	H314
Eye Dam. 1	H318
Aquatic Acute 2	H401

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS05

GHS07

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) : H290 - May be corrosive to metals.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H401 - Toxic to aquatic life.

Precautionary Statements (GHS-US/CA) : P234 - Keep only in original container.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
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.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see section 4 on this SDS).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material-damage.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. If involved in a fire and thermal decomposition occurs, or other decomposition occurs corrosive, toxic, and acrid vapors may be released. This product may contain lead and/or chromium.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Water	(CAS-No.) 7732-18-5	> 60	Not classified
Sodium hydroxide	(CAS-No.) 1310-73-2	11 - 30	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Disodium carbonate	(CAS-No.) 497-19-8	0 - 25	Eye Irrit. 2A, H319
Aluminum	(CAS-No.) 7429-90-5	0 - 15	Flam. Sol. 1, H228 Water-react. 2, H261 Comb. Dust
Ammonium hydroxide	(CAS-No.) 1336-21-6	0 - 4	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400
Sodium aluminate (NaAlO2)	(CAS-No.) 1302-42-7	0 - 4	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Sodium chloride	(CAS-No.) 7647-14-5	0 - 4	Not classified
Chromium	(CAS-No.) 7440-47-3	< 0.1	Comb. Dust
Lead	(CAS-No.) 7439-92-1	< 0.02	Carc. 1B, H350 Lact, H362 Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Comb. Dust

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Keep at rest and in a position comfortable for breathing. Seek medical attention. Symptoms may be delayed.

Skin Contact: Remove/Take off immediately all contaminated clothing. Immediately flush skin with plenty of water for at least 60 minutes. Get immediate medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth thoroughly with water. Do NOT induce vomiting. Seek medical attention immediately.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes severe skin burns and eye damage. Harmful if swallowed.

Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire. Contact with metals may evolve flammable hydrogen gas.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Keep upwind. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance.

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Metal oxides. Ammonia.

Other Information: Do not allow the product to be released into the environment. Do not allow run-off from fire fighting to enter drains or water sources.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all unnecessary exposure. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Keep upwind.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Notify Safety and Environmental personnel. Plan ahead for handling spills. Wear appropriate personal protective equipment. Abundant running water should be available for emergency use. Neutralize residues with dilute acid and rinse with water.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Ventilate area. Clean up spills immediately and dispose of waste safely. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labelled container for proper disposal.

6.4. Reference to Other Sections

See Section 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. Contact with metals may evolve flammable hydrogen gas. May be corrosive to metals.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke in areas where product is used.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Observe all regulations and local requirements regarding storage of containers. Container remains hazardous when empty. Continue to observe all precautions. Containers and equipment used to handle this product should be exclusively for this material.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from oxygen and oxidizers. Storage areas should be periodically checked for corrosion and integrity.

Incompatible Materials: Strong oxidizers. Strong acids. Light metals and their alloys. Galvanized surfaces. Organic chemicals. Nitrocarbons. Halocarbons. Trichloroethylene. Dichloroacetylene.

7.3. Specific End Use(s)

Production of alumina, removal of contaminants, recycled product, facilitate reduction/oxidation reactions, metals precipitation and neutralization reactions associated with chemical treatment processes.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Sodium hydroxide (1310-73-2)		
USA ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	2 mg/m³
USA NIOSH	NIOSH REL (ceiling) (mg/m³)	2 mg/m³
USA IDLH	US IDLH (mg/m³)	10 mg/m³
Alberta	OEL Ceiling (mg/m³)	2 mg/m³
British Columbia	OEL Ceiling (mg/m³)	2 mg/m³
Manitoba	OEL Ceiling (mg/m³)	2 mg/m³
New Brunswick	OEL Ceiling (mg/m³)	2 mg/m³
Newfoundland & Labrador	OEL Ceiling (mg/m³)	2 mg/m³
Nova Scotia	OEL Ceiling (mg/m³)	2 mg/m³
Nunavut	OEL Ceiling (mg/m³)	2 mg/m³
Northwest Territories	OEL Ceiling (mg/m³)	2 mg/m³
Ontario	OEL Ceiling (mg/m³)	2 mg/m³
Prince Edward Island	OEL Ceiling (mg/m³)	2 mg/m³
Québec	PLAFOND (mg/m³)	2 mg/m³
Saskatchewan	OEL Ceiling (mg/m³)	2 mg/m³

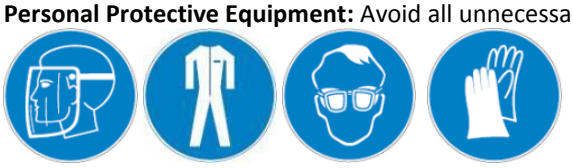
Yukon	OEL Ceiling (mg/m³)	2 mg/m³
Aluminum (7429-90-5)		
USA ACGIH	ACGIH TWA (mg/m³)	1 mg/m³ (respirable particulate matter)
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
USA NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)
Alberta	OEL TWA (mg/m³)	10 mg/m³ (dust)
British Columbia	OEL TWA (mg/m³)	1 mg/m³ (respirable)
Manitoba	OEL TWA (mg/m³)	1 mg/m³ (respirable particulate matter)
New Brunswick	OEL TWA (mg/m³)	10 mg/m³ (metal dust)
Newfoundland & Labrador	OEL TWA (mg/m³)	1 mg/m³ (respirable particulate matter)
Nova Scotia	OEL TWA (mg/m³)	1 mg/m³ (respirable particulate matter)
Nunavut	OEL STEL (mg/m³)	20 mg/m³ (metal-dust)
Nunavut	OEL TWA (mg/m³)	10 mg/m³ (metal-dust)
Northwest Territories	OEL STEL (mg/m³)	20 mg/m³ (metal-dust)
Northwest Territories	OEL TWA (mg/m³)	10 mg/m³ (metal-dust)
Ontario	OEL TWA (mg/m³)	1 mg/m³ (respirable)
Prince Edward Island	OEL TWA (mg/m³)	1 mg/m³ (respirable particulate matter)
Québec	VEMP (mg/m³)	10 mg/m³
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (dust)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (dust)
Chromium (7440-47-3)		
USA ACGIH	ACGIH TWA (mg/m³)	0.5 mg/m³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA OSHA	OSHA PEL (TWA) (mg/m³)	1 mg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.5 mg/m³
USA IDLH	US IDLH (mg/m³)	250 mg/m³
Alberta	OEL TWA (mg/m³)	0.5 mg/m³
British Columbia	OEL TWA (mg/m³)	0.5 mg/m³
Manitoba	OEL TWA (mg/m³)	0.5 mg/m³
New Brunswick	OEL TWA (mg/m³)	0.5 mg/m³
Newfoundland & Labrador	OEL TWA (mg/m³)	0.5 mg/m³
Nova Scotia	OEL TWA (mg/m³)	0.5 mg/m³
Nunavut	OEL STEL (mg/m³)	1.5 mg/m³ (metal)
Nunavut	OEL TWA (mg/m³)	0.5 mg/m³ (metal)
Northwest Territories	OEL STEL (mg/m³)	1.5 mg/m³ (metal)
Northwest Territories	OEL TWA (mg/m³)	0.5 mg/m³ (metal)
Ontario	OEL TWA (mg/m³)	0.5 mg/m³
Prince Edward Island	OEL TWA (mg/m³)	0.5 mg/m³
Québec	VEMP (mg/m³)	0.5 mg/m³
Saskatchewan	OEL STEL (mg/m³)	1.5 mg/m³
Saskatchewan	OEL TWA (mg/m³)	0.5 mg/m³
Yukon	OEL STEL (mg/m³)	3 mg/m³
Yukon	OEL TWA (mg/m³)	0.1 mg/m³
Lead (7439-92-1)		
USA ACGIH	ACGIH TWA (mg/m³)	0.05 mg/m³
USA ACGIH	ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA ACGIH	Biological Exposure Indices (BEI)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Persons applying this BEI are

		encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB (lead in blood level) over the current CDC reference value.)
USA OSHA	OSHA PEL (TWA) (mg/m³)	50 µg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³
USA IDLH	US IDLH (mg/m³)	100 mg/m³
Alberta	OEL TWA (mg/m³)	0.05 mg/m³
British Columbia	OEL TWA (mg/m³)	0.05 mg/m³
Manitoba	OEL TWA (mg/m³)	0.05 mg/m³
New Brunswick	OEL TWA (mg/m³)	0.05 mg/m³
Newfoundland & Labrador	OEL TWA (mg/m³)	0.05 mg/m³
Nova Scotia	OEL TWA (mg/m³)	0.05 mg/m³
Nunavut	OEL STEL (mg/m³)	0.15 mg/m³
Nunavut	OEL TWA (mg/m³)	0.05 mg/m³
Northwest Territories	OEL STEL (mg/m³)	0.15 mg/m³
Northwest Territories	OEL TWA (mg/m³)	0.05 mg/m³
Ontario	OEL TWA (mg/m³)	0.05 mg/m³ (designated substances regulation) 0.05 mg/m³ (applies to workplaces to which the designated substances regulation does not apply)
Prince Edward Island	OEL TWA (mg/m³)	0.05 mg/m³
Québec	VEMP (mg/m³)	0.05 mg/m³
Saskatchewan	OEL STEL (mg/m³)	0.15 mg/m³
Saskatchewan	OEL TWA (mg/m³)	0.05 mg/m³
Yukon	OEL STEL (mg/m³)	0.45 mg/m³ (dust and fume)
Yukon	OEL TWA (mg/m³)	0.15 mg/m³ (dust and fume)

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Avoid all unnecessary exposure. Face shield. Protective clothing. Protective goggles. Gloves.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Impermeable protective gloves.

Eye and Face Protection: A full face shield is recommended. Chemical goggles or safety glasses.

Skin and Body Protection: Chemical resistant suit. Rubber apron, boots.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Gray-white or brownish
Odor	:	Odorless
Odor Threshold	:	Not determined
pH	:	>= 12.5
Evaporation Rate	:	Not available
Melting Point	:	Not determined
Freezing Point	:	Not available

Boiling Point	:	288 - 298 °F (142.22 - 147.78 °C) For 50% NaOH
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	< 1 mm Hg
Relative Vapor Density at 20°C	:	Not determined
Relative Density	:	Not available
Specific Gravity	:	1.2-1.3
Solubility	:	100%
Partition Coefficient: N-Octanol/Water	:	Not determined
Viscosity	:	Not available
Explosive Properties	:	Product is not explosive

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire. Contact with metals may evolve flammable hydrogen gas.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

10.5. Incompatible Materials: Strong oxidizers. Strong acids. Light metals and their alloys. Galvanized surfaces. Organic chemicals. Nitrocarbons. Halocarbons. Trichloroethylene. Dichloroacetylene.

10.6. Hazardous Decomposition Products: Corrosive vapors. Acrid smoke and irritating fumes. Hydrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Oral: Harmful if swallowed.

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data:

Used Sodium Hydroxide	
ATE US/CA (oral)	428.89 mg/kg body weight

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.

pH: >= 12.5

Eye Damage/Irritation: Causes serious eye damage.

pH: >= 12.5

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

Symptoms/Injuries After Skin Contact: Causes severe skin burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sodium hydroxide (1310-73-2)	
LD50 Oral Rat	140 - 340 mg/kg
Disodium carbonate (497-19-8)	
LD50 Oral Rat	4090 mg/kg
LC50 Inhalation Rat	2300 mg/m³ (Exposure time: 2 h)
Ammonium hydroxide (1336-21-6)	
LD50 Oral Rat	350 mg/kg
Chromium (7440-47-3)	
LD50 Oral Rat	> 5000 mg/kg
LC50 Inhalation Rat	> 5.41 mg/l/4h
Sodium chloride (7647-14-5)	
LD50 Oral Rat	3 g/kg
LD50 Dermal Rabbit	> 10000 mg/kg (Species: New Zealand White)
LC50 Inhalation Rat	> 42 g/m³ (Exposure time: 1 h)
Chromium (7440-47-3)	
IARC Group	3
Lead (7439-92-1)	
IARC Group	2A
National Toxicology Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.
OSHA Hazard Communication Carcinogen List	In OSHA Hazard Communication Carcinogen list.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity No additional information available

Sodium hydroxide (1310-73-2)	
LC50 Fish 1	45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	40 mg/l
Disodium carbonate (497-19-8)	
LC50 Fish 1	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	310 - 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Ammonium hydroxide (1336-21-6)	
LC50 Fish 1	8.2 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.66 mg/l (Exposure time: 48 h - Species: water flea)
EC50 Daphnia 2	0.66 mg/l (Exposure time: 48 h - Species: Daphnia pulex)
NOEC Chronic Crustacea	3.47 mg/l
Lead (7439-92-1)	
LC50 Fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 Fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
Sodium chloride (7647-14-5)	
LC50 Fish 1	5560 (5560 - 6080) mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	1000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	12946 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	340.7 (340.7 - 469.2) mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
NOEC Chronic Fish	252 mg/l (Species: Pimephales promelas)

12.2. Persistence and Degradability Not available

12.3. Bioaccumulative Potential

Disodium carbonate (497-19-8)	
BCF Fish 1	(no bioaccumulation)

Sodium chloride (7647-14-5)	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Treatment Methods: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Sewage Disposal Recommendations: Do not dispose of waste into sewer. Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains sodium hydroxide, sodium aluminate)
Hazard Class : 8
Identification Number : UN3266
Label Codes : 8
Packing Group : I
ERG Number : 154

14.2. In Accordance with IMDG

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains sodium hydroxide, sodium aluminate)
Hazard Class : 8
Identification Number : UN3266
Label Codes : 8
Packing Group : I
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B

14.3. In Accordance with IATA

Proper Shipping Name : CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains sodium hydroxide, sodium aluminate)
Identification Number : 8
Hazard Class : UN3266
Label Codes : 8
Packing Group : I
ERG Code (IATA) : 8L

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Used Sodium Hydroxide	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Sodium hydroxide (1310-73-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb

Disodium carbonate (497-19-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Aluminum (7429-90-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 % (dust or fume only)

Sodium aluminate (NaAlO2) (1302-42-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Ammonium hydroxide (1336-21-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb

Chromium (7440-47-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
SARA Section 313 - Emission Reporting	1 %

Lead (7439-92-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	10 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
SARA Section 313 - Emission Reporting	0.1 %

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Sodium chloride (7647-14-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations

Lead (7439-92-1)	
U.S. - California - Proposition 65 - Carcinogens List	WARNING: This product contains chemicals known to the State of California to cause cancer.
U.S. - California - Proposition 65 - Developmental Toxicity	WARNING: This product contains chemicals known to the State of California to cause birth defects.
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm.
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm.

Sodium hydroxide (1310-73-2)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Aluminum (7429-90-5)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Ammonium hydroxide (1336-21-6)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Chromium (7440-47-3)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances
U.S. - Pennsylvania - RTK (Right to Know) List

Lead (7439-92-1)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

15.3. Canadian Regulations

Sodium hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List)

Disodium carbonate (497-19-8)
Listed on the Canadian DSL (Domestic Substances List)

Aluminum (7429-90-5)
Listed on the Canadian DSL (Domestic Substances List)

Sodium aluminate (NaAlO2) (1302-42-7)
Listed on the Canadian DSL (Domestic Substances List)

Ammonium hydroxide (1336-21-6)
Listed on the Canadian DSL (Domestic Substances List)

Chromium (7440-47-3)
Listed on the Canadian DSL (Domestic Substances List)

Lead (7439-92-1)
Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

Sodium chloride (7647-14-5)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/17/2018

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 1B	Carcinogenicity Category 1B
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A

Flam. Sol. 1	Flammable solids Category 1
Lact	Reproductive toxicity (Lact.)
Met. Corr. 1	Corrosive to metals Category 1
Repr. 1A	Reproductive toxicity Category 1A
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
Water-react. 2	Substances and mixtures which in contact with water emit flammable gases Category 2
H228	Flammable solid
H261	In contact with water releases flammable gas
H290	May be corrosive to metals
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H350	May cause cancer
H360	May damage fertility or the unborn child
H362	May cause harm to breast-fed children
H372	Causes damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)