SAFETY DATA SHEET

Revision date 10-Oct-2023 **Revision Number** 7

1. Identification

Product identifier

Product Name Sodium Aluminate 38% Solution

Other means of identification

Product Code(s) 3213M

UN number or ID number UN1819

Synonyms Liquid sodium aluminate

Recommended use of the chemical and restrictions on use

Recommended use No information available

Restrictions on use No information available None known

Details of the supplier of the safety data sheet

Supplier Address
G2O Technologies LLC
9213 Arch Street Pike
Little Rock, AR 72206
+1-800-453-2586 Hours: Monday-Friday
9:00-5:00 CST (Central Standard Time)

Manufacturer Address
USALCO, LLC
2601 Cannery Ave.
Baltimore, MD 21226

Contact Point sds@usalco.com

Emergency Telephone CHEMTREC: (800) 424-9300
Outside USA - +1 (703) 527-3887 collect calls accepted

2. Hazard(s) identification

Classification

Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Hazards not otherwise classified (HNOC)
Not applicable

Label elements

DANGER

Hazard statements
Causes severe skin burns and eye damage

Appearance Clear to slightly hazy **Physical state** Liquid **Odor** No appreciable odor

Precautionary Statements - Prevention
Keep only in original packaging.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands, face and any exposed skin thoroughly after handling. Do not touch eyes.

Precautionary Statements - Response
Get emergency medical help immediately.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Get medical help.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Unknown acute toxicity 32% of the mixture consists of ingredient(s) of unknown toxicity

Other information
May be harmful if swallowed.

3. Composition/information on ingredients

Substance

Synonyms Liquid sodium aluminate.

Chemical name	CAS No	Weight-%	Trade secret
Water	7732-18-5	60	*
Sodium aluminum oxide	1302-42-7	32	*
Sodium Hydroxide	1310-73-2	8	*

*The exact percentage (concentration) of composition has been withheld as a trade secret. While some components are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

4. First-aid measures

Description of first aid measures

General advice Get medical attention if irritation or other symptoms occur. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult,

(trained personnel should) give oxygen. Call physician immediately.

Eye contact Remove contact lenses, if worn. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek medical attention if irritation should develop.

Skin contact Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and footwear. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion Do not induce vomiting. Give large amounts of water followed by milk if available. If vomiting should occur spontaneously, keep airway clear. Get medical attention. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Depending on the concentration, repeated ingestion may cause effects as with acute exposure. Effects depend on concentration and duration of exposure. Repeated or prolonged skin contact may result in dermatitis or effects similar to acute exposure. Repeated exposure by inhalation may cause inflammatory ulcerative changes to the mouth and possibly bronchial and gastrointestinal disturbances. Repeated or prolonged eye contact may result in conjunctivitis or effects similar to acute exposure. Inhalation of corrosive substances may cause irritation of the respiratory tract with coughing, choking, pain and possible burns of the mucus membrane. In some cases pulmonary edema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tightness in the chest, frothy sputum cyanosis, and dizziness. Physical findings may include low blood pressure and high pulse. Severe cases may be fatal. Eye and skin contact may cause severe irritation, pain and burns. Ingestion may cause immediate pain and severe burns of the mucous membrane. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion. Edema of the epiglottis and shock may occur.

Indication of any immediate medical attention and special treatment needed

Note to physicians Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. Fire-fighting measures

Suitable Extinguishing Media Not combustible. Use appropriate extinguishing media for material that is supplying fuel. Use water spray to cool the surrounding area and maintain fire temperature below decomposition temperature. Water Spray, Carbon Dioxide, Foam, Dry Chemical.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical May produce hazardous fumes or hazardous decomposition products.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear suitable protective clothing and gloves.

Other information Do not allow liquid to enter streams or waterways.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter streams or waterways.

Methods for cleaning up Clear spills immediately. For small spills, neutralize with weak acidic material such as vinegar, an inert material to absorb, or wash product to a chemical sewer. Place contaminated materials into containers and store in a safe place to await proper disposal.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Keep container closed when not in use. Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, gloves, and protective clothing when handling. Wash thoroughly after handling. Do not breathe mist or spray. Use with adequate ventilation and employ respiratory protection where mist or spray may be generated. Do not take internally. FOR INDUSTRIAL USE ONLY.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed when not in use. Store in a cool, dry place away from direct heat.

8. Exposure controls/personal protection

Control parameters

Exposure Limits .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Sodium Hydroxide 1310-73-2	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Biological occupational exposure limits
This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, 'Industrial Ventilation, A Manual of Recommended Practices', most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

Hand protection	Appropriate chemical resistant gloves should be worn.
Skin and body protection	Standard work clothing and work shoes.
Respiratory protection	If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.
Environmental exposure controls	Do not allow liquid to enter streams or waterways.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear to slightly hazy
Color	Amber
Odor	No appreciable odor
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	~ 14	No information available
Melting point / freezing point	< -32.2 °C (< -26 °F)	No information available
Boiling point / boiling range	116 °C (241 °F)	No information available
Flash point	Not applicable No data available	No information available
Evaporation rate	No information available No data available	No information available
Flammability (solid, gas)	Not applicable No data available	No information available
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	No information available
Relative vapor density	No data available	No information available
Relative density	1.4 - 1.6	None known
Water solubility	No data available Complete;	No information available
Solubility(ies)	No information available	None known
Partition coefficient	No data available	None known
Autoignition temperature	Not applicable No data available	None known
Decomposition temperature	No information available -	None known
Kinematic viscosity	No data available	No information available
Dynamic viscosity	200 - 400 cps	Brookfield @ 25 °C

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Liquid Density	11.6 - 13.3 lbs./gal.
Bulk density	No information available

10. Stability and reactivity

Reactivity	No data available.
Chemical stability	Stable under normal conditions of handling, use and transportation.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Not anticipated under normal or recommended handling and storage conditions.

Conditions to avoid None known based on information supplied.

Incompatible materials Strong acids.

Hazardous decomposition products Thermal decomposition may release toxic and/or hazardous gases.

11. Toxicological information

Information on likely routes of exposure

Product Information Specific test data for the substance or mixture is not available.

Inhalation Inhalation of mist or spray may irritate respiratory tract and may cause burns and difficulty breathing.

Eye contact Direct contact may cause severe irritation, pain and burns, possibly severe. May result in permanent blindness. The degree of injury depends on the concentration and duration of contact. The full extent of the injury may not be immediately apparent.

Skin contact Corrosive to skin. Direct contact may cause severe irritation, pain and possibly burns.

Ingestion Causes burns of the mouth, throat and stomach. Will cause burns of mucous membreanes of gastrointestinal tract, with nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Burning. Itching. Rashes. Redness. Blindness. Coughing and/ or wheezing. Difficulty in breathing. Pain or irritation. Blistering may occur. Abdominal pain. Nausea and vomiting. Causes serious eye damage.

Acute toxicity

Numerical measures of toxicity
No information available

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 2,762.50 mg/kg
ATEmix (dermal) 11,475.00 mg/kg

Unknown acute toxicity 32% of the mixture consists of ingredient(s) of unknown toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Sodium Hydroxide 1310-73-2	= 325 mg/kg (Rat)	= 1350 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes burns.

Serious eye damage/eye irritation Risk of serious damage to eyes.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

Reproductive toxicity No information available.

Developmental toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Eyes, Skin, Gastrointestinal tract (GI), Respiratory system.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium Hydroxide 1310-73-2	--	LC50 (96 h static) = 45.4 mg/L (Oncorhynchus mykiss)	-	-

Persistence and degradability Not determined. No information available.

Bioaccumulation No information available.

Mobility Not determined. No information available.

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations. Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Since empty containers retain product residue, follow label warnings even after container is emptied.

US EPA Waste Number D002 (Corrosivity).

14. Transport information

DOT Regulated

- **UN number or ID number** UN1819
- **Proper shipping name** Sodium Aluminate Solution
- **Transport hazard class(es)** 8
- **Packing group** II
- **Emergency Response Guide** 154

Number

TDG Regulated
UN number or ID number UN1819
UN proper shipping name Sodium Aluminate Solution
Transport hazard class(es) 8
Packing group II

Technical Name

IATA Regulated
UN number or ID number UN1819
UN proper shipping name Sodium Aluminate Solution
Transport hazard class(es) 8
Packing group II
ERG Code 8L

IMDG Regulated
UN number or ID number UN1819
UN proper shipping name Sodium Aluminate Solution
Transport hazard class(es) 8
Packing group II
EmS-No F-A; S-B

15. Regulatory information

International Inventories

TSCA All ingredients are on the inventory or exempt from listing.

Chemical name	CAS No	US TSCA Inventory listing	US TSCA inactive/active designation
Water	7732-18-5	Present	Active
Sodium aluminum oxide	1302-42-7	Present	Active
Sodium Hydroxide	1310-73-2	Present	Active

DSL/NDSL All ingredients are on the DSL inventory or exempt from listing. None of the ingredients are on the NDSL inventory.
EINECS/ELINCS All ingredients are on the EINECS inventory or are exempt from listing. None of the ingredients are on the ELINCS inventory.
ENCS All ingredients are on the inventory or exempt from listing.
IECSC All ingredients are on the inventory or exempt from listing.
KECL All ingredients are on the inventory or exempt from listing.
PICCS All ingredients are on the inventory or exempt from listing.
AICS All ingredients are on the inventory or exempt from listing.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium Hydroxide 1310-73-2	1000 lb	-	-	X

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Sodium Hydroxide 1310-73-2	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium Hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 0	**Special hazards**
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 0	**Personal protection** X

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal

Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date	10-Oct-2023
Revision Note	No information available.

Disclaimer

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.

End of Safety Data Sheet