1. Identification of product

Product identification on the label

Lynn Manufacturing, Inc. Sodium Silicate

Item Numbers: 5602, 5603, 5607

Lynn Manufacturing, Inc. Sodium Silicate (Item 5602) is contained within many Lynn Manufacturing, Inc. Combustion Chamber Kits including:

Item Numbers: 1060, 1064, 1065, 1066, 1067, 1068, 1071, 1072, 1074, 10861087, 1093, 1095, 1096, 11011104, 1120, 1121, 1122, 11261127, 1129, 1130, 1132, 11341148, 1153, 1155, 1156, 1159, 1167, 1179, 5601, 5602, 9448

Other means of identification

Liquid sodium silicate, water glass, liquid glass, sodium silicate liquid siliceous

Recommended use of the chemical

Adhesives and binders, pulp and paper, deinking, Detergents / soaps, gels, catalysts, soil stabilization, textiles, drilling fluids, zeolites, mineral processing, refractory cements, water treatment chemicals, silica products

Name, address, and telephone number

Lynn Manufacturing, Inc.
15 Marion Street
Lynn, MA 01905
781.593.2500

Emergency phone number

1-800-733-3665 or 1-972-404-3228

For additional SDSs and to confirm this is the most current SDS for this product, please visit our website www.lynnmfg.com/documentation or send a request to contactus@lynnmfg.com

2. Hazard Identification

Classification of the chemical in accordance with paragraph of §1910.1200

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

EMERGENCY OVERVIEW:

Color:	Colorless to slight tint
Appearance:	Clear to opaque
Odor:	Odorless to slight odor

Signal Word: WARNING

MAJOR HEALTH HAZARDS: CAUSES SERIOUS EYE IRRITATION. CAUSES SKIN IRRITATION. HARMFUL IF SWALLOWED
PHYSICAL HAZARDS: Upon drying forms thin glass that can cut skin. Spilled material may cause slipping hazard.
PRECAUTIONARY STATEMENTS: Wear protective gloves, protective clothing, eye, and face protection as appropriate. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.
ADDITIONAL HAZARD INFORMATION: Toxicity may be delayed, and may not be readily visible. Significant exposures must be referred for medical attention immediately. There is no specific antidote.

HAZARD CLASSIFICATION:

GHS: CONTACT HAZARD - SKIN: Category 2 - Causes skin irritation

GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation
GHS: ACUTE TOXICITY - ORAL: Category 4 - Harmful if swallowed

UNKNOWN ACUTE TOXICITY: Not applicable. This product was tested as a whole. This information only pertains to untested mixtures.

GHS SYMBOL: Exclamation mark

GHS SIGNAL WORD: WARNING

GHS - Health Hazard Statement(s)
• Causes serious eye irritation
• Causes skin irritation
• Harmful if swallowed

GHS - Precautionary Statement(s) - Prevention
• Wear eye protection/face protection
• Wear protective gloves
• Wash thoroughly after handling
• Do not eat, drink or smoke when using this product

GHS - Precautionary Statement(s) - Response
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
• If eye irritation persists: Get medical advice/attention
• IF ON SKIN: Wash with plenty of water
• If skin irritation occurs: Get medical advice/attention
• Take off contaminated clothing and wash it before reuse
• IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
• Rinse mouth
• Specific treatment (see First Aid information on product label and/or Section 4 of the SDS)

GHS - Precautionary Statement(s) - Storage
• There are no Precautionary-Storage phrases assigned

GHS - Precautionary Statement(s) - Disposal
• Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

Hazards Not Otherwise Classified (HNOC) - GHS
None identified

3. Composition / Information On Ingredients

Composition table

COMPONENTS	CAS NUMBER	% BY WEIGHT
Water	**7732-18-5**	**50-80**
Sodium silicate	**1344-09-8**	**20-50**

4. First-Aid measures

ROUTE	COMMON SYMPTOMS	FIRST AID
Inhalation	Inhalation can cause severe irritation of mucous membranes and upper respiratory tract.	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Causes irritation to the gastrointestinal tract.	If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Contact a Poison Center, or a doctor/physician, or get medical attention if you feel unwell.
Skin	Causes severe irritation.	Immediately flush with plenty of water for a t least 15 minutes. Remove contaminated clothes and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eyes	Severe irritation with effects similar to those of dilute caustics.	Immediately flush eyes with plenty of water for a t least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting measures

Fire Hazard: Negligible fire hazard.
Extinguishing Media: Use media appropriate for surrounding fire
Fire Fighting: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
Sensitivity to Mechanical Impact: Not sensitive.
Sensitivity to Static Discharge: Not sensitive.
Lower Flammability Level (air): Not flammable
Upper Flammability Level (air): Not flammable
Flash point: Not flammable
Auto-ignition Temperature: Not applicable

6. Accidental Release Measures

Personal Precautions:
Avoid contact with skin and eyes. Avoid breathing fumes, vapor, mist, or spray. Dries to form glass film which can easily cut skin. Spilled material may cause a slipping hazard. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Environmental Precautions:
This material is alkaline and may raise the pH of surface waters with low buffering capacity. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

Methods and Materials for Containment and Cleaning Up:
Flush spill area with water, if appropriate. Liquid material may be removed with a vacuum truck. Shovel dried residue into suitable container. Recycle or dispose according to regulations. See Section 13, Disposal considerations, for

additional information

7. Handling and storage

Precautions for Safe Handling:

Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Avoid breathing vapor, mist, or spray. Product shipped/handled hot can cause thermal burns. Use care when handling hot material. Do not eat, drink or smoke in areas where this material is used. Use appropriate personal protective equipment (PPE). See Section 8, Exposure Controls and Personal Protection, for additional information.

Safe Storage Conditions:

Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

Incompatibilities/ Materials to Avoid:

Can generate heat when mixed with acids, Avoid prolonged contact with alkali sensitive metals such as: aluminum, brass, bronze, copper, lead, tin, zinc because flammable hydrogen gas can be generated

8. Risk Management Measures / Exposures Controls / Personal Protection

REGULATORY EXPOSURE LIMIT(S):

None. This product does not contain any components that have regulatory occupational exposure limits (OEL's) established.

NON-REGULATORY EXPOSURE LIMIT(S):

Listed below are the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established.

Recommended Exposure Limits (REL's) are non-regulatory occupational exposure limits that the manufacturer has established based on health effects data

Sodium silicate 1344-09-8 (20-50), 6 mg/m3

ENGINEERING CONTROLS: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear safety glasses with side-shields. If eye contact is likely, wear chemical resistant safety goggles. Wear chemical safety goggles with a face shield to protect against eye and skin contact when appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and Body Protection: Wear protective clothing to minimize skin contact. When skin contact is likely, wear Tychem or a similar protective suit. Wear appropriate heat resistant clothing when potential exists for contact with hot materials.

Hand Protection: Wear appropriate chemical resistant gloves. Consult a glove supplier for assistance in selecting an appropriate chemical resistant glove. Use gloves that are cut resistant if handling dry glass material.

Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile, Tychem, Tyvek

Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. Physical and chemical properties

Appearance:	Clear to opaque
Color:	Colorless to slight tint
Odor:	Odorless to slight odor
Odor Threshold [ppm]:	No data available.
Molecular Formula:	xSiO2/Na2O (x >= 3.0 by weight)
Decomposition Temperature:	No data available
Boiling Point/Range:	214 - 216 °F (101 - 102 °C)
Freezing Point/Range:	30 °F (-1 °C).
Melting Point/Range:	Not applicable to liquids
Vapor Pressure:	No data available
Vapor Density (air=1):	No data available
Relative Density/Specific Gravity (water=1):	1.20 - 1.61
Density:	10.0 - 13.4 lbs/gal
Water Solubility:	100%
pH:	11.0 - 11.4
Volatility:	> 50%
Evaporation Rate (ether=1):	No data available
Partition Coefficient (n-octanol/water):	No data available
Flash point:	Not flammable
Flammability (solid, gas):	Not applicable
Lower Flammability Level (air):	Not flammable
Upper Flammability Level (air):	Not flammable
Auto-ignition Temperature:	Not applicable
Viscosity:	20 - 1500 cp

10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.
Reactivity: Not reactive under normal temperatures and pressures.
Possibility of Hazardous Reactions: Contact with acids will cause gelling and evolution of heat. Prolonged contact with incompatible metals may produce flammable hydrogen gas.

Conditions to Avoid:
• (e.g., static discharge, shock, or vibration) -
• Prolonged storage above 140 °F (60 °C)

Incompatibilities/ Materials to Avoid: Can generate heat when mixed with acids; Avoid prolonged contact with alkali sensitive metals such as: aluminum, brass, bronze, copper, lead, tin, zinc because flammable hydrogen gas can be generated

Hazardous Decomposition Products: None known

Hazardous Polymerization: Will not occur.

11. Toxicological information

IRRITATION DATA: As listed below

Standard Draize (Eye):
Test results for solutions with the following pH/weight ratio of SiO2/Na2O are as follows: 11.6/2.54 = irritant; 11.6/2.4 = irritant; 12.2/2.0 = corrosive; 12.4/1.8 = corrosive

TOXICITY DATA:
Note: The test material for the toxicological studies was sodium silicate.

LD50 Oral:	LD50 Dermal:	LC50 Inhalation:
1153 mg/kg (Rat)	4,640 mg/kg (Rabbit)	No data available

POTENTIAL HEALTH EFFECTS:
Eye contact: Causes serious eye irritation. Eye exposures may cause burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. The full extent of the injury may not be immediately apparent.
Skin contact: Causes skin irritation. Contact with skin may result in redness, itching, irritation, burning sensation, swelling.
Inhalation: Inhalation of mist, vapor, or spray may cause irritation of the respiratory tract, possibly with coughing, choking, and pain either immediately or within 72 hours.
Ingestion: Harmful if swallowed. May cause immediate pain and severe burns of the upper and lower gastrointestinal tract with vomiting, nausea, and diarrhea.
Chronic Effects: Repeated or prolonged skin contact may result in dermatitis.

SIGNS AND SYMPTOMS OF EXPOSURE:
Solutions of sodium silicate are alkaline. Exposure to alkaline solutions may result in irritation to any contacted tissue, including possible burns, depending on the concentration, duration, and nature of the exposure. This material is not a crystalline silica, and it does not cause pulmonary silicosis.

Inhalation (Breathing): Respiratory System Effects: Inhalation of this material may cause irritation, redness of upper and lower airways, coughing.
Skin: Skin Irritation. Skin exposure may cause irritation, redness, itching, swelling, burning sensation.
Eye: Eye Irritation: Eye exposure may cause severe irritation, and pain. The full extent of injury may not be immediately apparent.
Ingestion (Swallowing): Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur. Interaction with Other Chemicals Which Enhance Toxicity: None known.

GHS HEALTH HAZARDS:
GHS: CONTACT HAZARD - EYE: Category 2A - Causes serious eye irritation
Skin Absorbent / Dermal Route: NO.

12. Ecological information

ECOTOXICITY DATA:

Component	Freshwater Fish	Invertebrate Toxicity	Algae Toxicity:	Other Toxicity:
Sodium Silicate	3185 mg/L LC50 Brachydanio rerio 96h semi-staticmg/L LC50 Lepomis macrochirus 96h	216 mg/L EC50	No data available	No data available

Aquatic Toxicity: This material is believed to be practically non-toxic to aquatic life

FATE AND TRANSPORT:
BIODEGRADATION: This material is inorganic and not subject to biodegradation.
PERSISTENCE: This material is believed to persist in the environment.
BIOCONCENTRATION: This material is not expected to bioconcentrate in organisms.

ADDITIONAL ECOLOGICAL INFORMATION: This material has exhibited slight toxicity to terrestrial organisms.

13. Disposal Considerations

Waste from material:
Reuse or recycle if possible. May be subject to disposal regulations. Dispose in accordance with all applicable regulations.

Container Management:
Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container must be disposed of in compliance with applicable regulations

14. Transport information

LAND TRANSPORT

U.S. DOT 49 CFR 172.101:
Status: Not Regulated.
CANADIAN TRANSPORTATION OF DANGEROUS GOODS:
Status: Not Regulated.

MARITIME TRANSPORT (IMO / IMDG) Not regulated

Status - IMO / IMDG: Not Regulated

15. Regulatory information

U.S. REGULATIONS

OSHA REGULATORY STATUS:
This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):
Not regulated.

SARA EHS Chemical (40 CFR 355.30)
Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):
Acute Health Hazard

SARA HAZARD CATEGORIES ALIGNED WITH GHS (2018):
Health Hazard - Acute Toxin (any route of exposure)
Health Hazard - Skin Corrosion or Irritation
Health Hazard - Serious eye damage or eye irritation

EPCRA SECTION 313 (40 CFR 372.65):
Not regulated

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):
Not regulated

FDA: Sodium Silicates have Generally Recognized as Safe (GRAS) status under specific FDA regulations. Refer to 21 Code of Federal Regulations (CFR) 173, 175, 176, 177, 182, and 184, which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA).

EPA'S CLEAN WATER AND CLEAN AIR ACTS:

Component(s) not listed on impacted regulatory lists

NATIONAL INVENTORY STATUS

Component	TSCA Inventory	TSCA 12(b)	TSCA - Section 4	TSCA - Section 5	TSCA - Section 6	TSCA - Section 8	TSCA - 8(a) PAIR	TSCA - 8(d) IUR	TSCA - 8(a) CAIR
1344-09-8	Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.
TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

STATE REGULATIONS

California Proposition 65:

This product and its ingredients are not listed, but it may contain impurities/trace elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations

Component	Canada - CEPA - Schedule I - List of Toxic Substances	Canada - NPRI	Canada - CEPA - 2010 Greenhouse Gases (GHG) Subject to Mandatory Reporting	Canadian Chemical Inventory:	NDSL:
Sodium silicate	Not listed	Not listed	Not listed	Not listed	Not listed

16. Other Information

SDS Prepared by Lynn Manufacturing, Inc.

Disclaimer

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, Lynn Manufacturing, Inc. does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.