SAFETY DATA SHEET

Sodium Metasilicate Anhydrous

SECTION 1: IDENTIFICATION

Product identifier used on a label:	**Sodium Metasilicate Anhydrous**
Product code:	1076
Recommended use of the chemical and restrictions on use:	Industrial applications.
Name, address and phone # of supplier:	Aqua Bond Inc. PO Box 63635 Toronto, ON, M1V 5K2 (416) 754-7211
24 Hr. Emergency phone #	**CANUTEC (613) 996-6666**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the chemical: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:
CORROSIVE TO METALS – Category 1
SKIN CORROSION/IRRITATION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY – Single Exposure (Respiratory Tract Irritation) - Category 3

Label elements:



Signal word: Danger

Hazard statements:
H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation

Precautionary statements:
P234 – Keep only in original container
P260 - Do not breathe mist, vapours, spray.
P264 – Wash exposed skin thoroughly after handling.
P271 – Use only outdoors or in a well-ventilated area
P280 - Wear eye protection, face protection, protective clothing, and protective gloves.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position 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/physician.
P363 - Wash contaminated clothing before reuse.

P390 – Absorb spillage to prevent material damage.
P403 + P233 – Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up.
P501 - Dispose of contents/container to Comply with applicable regulations. If inhaled: Remove person to fresh air and keep comfortable for breathing.

Other hazards: No additional hazards available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/ mixture: Mixture

Ingredient name	**CAS Number**	**Concentration (%)**
Sodium Metasilicate	6834-92-0	100

SECTION 4: FIRST-AID MEASURES

Description of first aid measures:

Ingestion: Rinse mouth with water. Consult a physician. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.

Inhalation: Get medical advice/attention if you feel unwell or are concerned. Remove source of exposure or move person to fresh air and keep comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor. Consult a physician.

Skin contact: Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash contaminated clothing before re-use. Immediately call a POISON CENTER/doctor. Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available.

Eye contact: Immediately call a POISON CENTER/doctor. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for duration of 30 minutes or until medical aid is available. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Most important symptoms and effects, both acute and delayed:

No data available.

Indication of any immediate medical attention and special treatment needed:

No data available.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use caution when applying carbon dioxide in confined spaces. Large Fire: Water spray, fog or alcohol-resistant foam.

Unsuitable: Do not use straight stream of water.

Special hazards arising from the substance: Containers may explode in fire. Fire will produce irritating and corrosive gases. Contact with metals may evolve flammable hydrogen gas.

Hazardous thermal: Silicic acid will form if product comes in contact with water at high

decomposition products:	temperatures.
Special protective actions for fire-fighters:	Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Large Fire: Dike fire-control water for later disposal; do not scatter the material.
Special protective equipment for fire-fighters:	Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Environmental precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for containment and cleaning up:	Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Take account of toxic/corrosive precipitation water. Take up liquid spill into absorbent material, e.g.: dry sand/earth or powdered limestone. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Small quantities of liquid spill: neutralize with acid solution. Wash away neutralized product with plentiful water. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to proper disposal company. Wash clothing and equipment after handling.
Special spill response procedures:	In case of transportation accident, contact CANUTEC (613) 996-6666.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Wash hands after use. Do not get in eyes, on skin or on clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. This product is not intended for human or animal consumption. Use pneumatic and/or mechanical systems for bulk transfer of the substance Use exhaust

	ventilation and/or dust collecting filters for bulk transfer and storage. Use approved respiratory protection when handling. Keep bulk of materials out of sewer drains. Eyewash stations and showers should be available in areas where this material is used and stored.
Conditions for safe storage:	Store in original containers. Keep containers securely sealed. Keep containers securely sealed when not in use. Protect containers against banging or other physical damage when storing, transferring, or using them. Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of local ventilation is recommended to control emissions near the source.
Incompatible materials:	Can generate flammable hydrogen gas when in contact with aluminum, zinc or tin. May corrode aluminum, zinc, and tin. Sodium metasilicate can be precipitated by acids alkaline earth, and heavy metal ions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Exposure limits

Ingredient	**Exposure limits**
Sodium Metasilicate	No data available

Engineering controls:	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems. Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.
Individual protection measures:	Eyes/face: Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when Skin: Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, and dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber. Respiratory: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White powder
Odour:	Odourless

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Odour threshold:	Not available.
pH:	12.5 at 10 g/l at 20 °C
Melting point:	1,090 °C
Freezing point:	Not available.
Initial boiling point and boiling range:	Not known - decomposes
Flash point:	Not combustible (does not burn)
Evaporation rate:	not known – not volatile
Vapour pressure:	0.0103 hPa at 1,175 °C
Vapour density:	4.2 (air = 1)
Relative density:	1.05 @ 20°C
Upper Explosion Level	Not available.
Lower Explosion Level	Not available.
Water Solubility:	350 g/l at 20 °C
Coefficient Water/Oil:	not known – completely insoluble in octanol

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Not available.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Polymerization will not occur.
Conditions to avoid:	Not available.
Incompatible materials:	Strong acids, Lead, Tin/tin oxides, Zinc, Aluminum.
Hazardous decomposition products:	No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure:	Inhalation, Ingestion, Skin contact, Eye contact
Acute Toxicity:	LD50 Oral -rat -male and female: 1,152 -1,349 mg/kg Remarks: Gastrointestinal: Ulceration or bleeding from stomach.
Carcinogenicity:	No data available.
Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
Respiratory/Skin Sensitization:	No data available.
Serious Eye Damage/Irritation:	No known significant effects or critical hazards.
Skin Corrosion/Irritation:	Causes severe skin burns and eye damage.
STOT - Repeated Exposure:	No data available.
STOT - Single Exposure:	May cause respiratory irritation
Aspiration Hazard:	May cause pulmonary edema.
Synergistic Materials:	No data available.

SECTION 12 ECOLOGICAL INFORMATION

Toxicity :	Toxicity to fish: Semi-static test LC50 - Danio rerio (zebra fish) - 210 mg/l - 96 h

Biodegradability:	Final product of degradation is silica sand.
Bioaccumulation:	Low potential for bioaccumulation
Mobility:	Highly mobile in soils.
Other Adverse Effects:	No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

SECTION 14: TRANSPORT INFORMATION

	TDG
UN Number:	UN3253
UN proper shipping name:	DISODIUM TRIOXOSILICATE
Transport hazard class:	8
Packing group:	III
Environmental hazard:	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special precautions for user:	Secure containers (full and/or empty) with suitable hold down devises during shipment and ensure all caps, valves, or closures are secured in the closed position.

SECTION 15: REGULATORY INFORMATION

DSL,TSCA,EU_EC_Inventory: Listed.

SECTION 16: OTHER INFORMATION

Revision date: September 22, 2023

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Disclaimer

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