



Safety Data Sheet

Silver Pre-Soak

1. IDENTIFICATION

Product Identifier: Silver Pre-Soak
Canadian TDG: UN1791
Synonyms: None known
Chemical Family: None known
Recommended Use: Cutlery Pre-Soak
Restrictions on Use: None

Manufacturer / Supplier:

Genesis Chemicals
602 – 13th St SE
Medicine Hat, AB
T1A 1X3

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd

Preparation Date of SDS: February 6, 2017

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2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion / irritation – Category 1; Serious eye damage / Eye irritation – Category 1; Specific target organ toxicity, single exposure – Category 3 (respiratory); Hazardous to aquatic environment, acute – Category 1; Corrosive to metals – Category 1



Signal Word: Danger

Hazard Statement(s):

Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause respiratory irritation.
Very toxic to aquatic life.
May be corrosive to metals.

Precautionary Statement(s):

Prevention:

Do not breathe dust/ fumes/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Use only outdoors or in a well-ventilated area.
Avoid release to the environment.
Keep only in original container.

Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Call a poison center or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so.
Continue rinsing.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Remove/Take off immediately all contaminated clothing.
Wash contaminated clothing before reuse.
Immediately call a poison center or doctor/physician.

Storage:

Store in a closed container.
Store in a dry place.
Store locked up.
Store in a well-ventilated place.
Store in corrosive resistant container with a resistant inner liner.

Disposal:

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

Other Hazards:

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Concentration % |
|--------------------------|-----------|-----------------|
| Sodium hypochlorite | 7681-52-9 | 1-5 |
| Potassium Hydroxide | 1310-58-3 | 1-5 |
| Sodium Hydroxide | 1310-73-2 | 1-5 |
| Sodium Silicate | 1344-09-8 | 1-5 |
| Pentasodium Triphosphate | 7758-29-4 | 1-5 |

Notes

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor if you feel unwell or are concerned.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation or a rash occurs, get medical advice/attention.

Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact

lenses, if present and easy to do. If eye irritation persists, get medical advice/attention.

Ingestion

Immediately call a Poison Centre or doctor. Do not induce vomiting.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: at high concentrations symptoms may include headache, nausea, dizziness, drowsiness and confusion.

If on skin: may cause an allergic skin reaction in some people. Symptoms include redness, rash, itching and swelling.

If in eyes: symptoms include sore, red eyes, and tearing.

If swallowed: may be drawn into the lungs if swallowed or vomited, causing severe lung damage. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Immediate Medical Attention and Special Treatment

Special Instructions

Not applicable.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Water fog, carbon dioxide, dry chemical powder or appropriate foam.

Unsuitable Extinguishing Media

Water jet, as well do not you a Mono Ammonium Phosphate (MAP) fire extinguisher. Such use may cause explosions with the release of toxic gas.

Specific Hazards Arising from the Chemical

The chemical greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Approach fire from upwind to avoid hazardous vapours or gases.

Stop leak before attempting to put out the fire. Product could form an explosive mixture and reignite. Keep containers cool to avoid bursting.

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours, flammable or explosive atmosphere.

Dike and recover contaminated water for appropriate disposal.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. If there is potential for skin contact with concentrated cleaner: chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Concentrated product: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Distant ignition and flashback are possible.

Increase ventilation to area or move leaking container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up.

Before entry, especially into confined areas, check atmosphere with an appropriate monitor. Monitor area for flammable or explosive atmosphere.

Product (diluted as directed): use the personal protective equipment recommended in Section 8 of this safety data sheet. No other special precautions are necessary.

Environmental Precautions

Concentrated product: do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building,

prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Concentrated product: small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Do NOT use combustible materials such as sawdust. Place used absorbent into suitable, covered, labelled containers for disposal.

Concentrated product: large spills or leaks: cover the spill surface with the appropriate type of foam to reduce the release of vapour. Dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Dike and recover contaminated water for appropriate disposal. Store recovered product in suitable containers that are: tightly-covered.

Product (diluted as directed): no special clean-up methods are necessary.

Other Information

Report spills to local health, safety and environmental authorities, as required.

7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling diluted product: no special handling precautions are necessary.

When handling concentrated product: only use where there is adequate ventilation. Avoid generating vapours or mists. Keep containers tightly closed when not in use or empty. Electrically bond and ground equipment. Ground clips must contact bare metal. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Use non-sparking tools. Wear personal protective equipment to avoid direct contact with this chemical.

Do NOT smoke in work areas. Wash hands thoroughly after handling this material. Immediately remove contaminated clothing using the method that minimizes exposure. Keep contaminated clothing under water, in closed containers. Launder clothes before rewearing. Inform laundry personnel of product hazard(s). Do not take contaminated clothing home.

Conditions for Safe Storage

Concentrated product: store in an area that is: temperature-controlled, well-ventilated, out of direct sunlight and away from heat and ignition sources, an approved, fire-resistant area, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Keep amount in storage to a minimum. Avoid bulk storage indoors.

Comply with all applicable health and safety regulations, fire and building codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Ingredients | ACGIH® TLV® | OSHA PEL | IDLH |
|--------------------------|-------------------------------|-----------------------------|---------------|
| Sodium hypochlorite | 2 mg/m ³ (STEL) | Not available | Not available |
| Potassium Hydroxide | 2 mg/m ³ Ceiling | 2 mg/m ³ Ceiling | Not available |
| Sodium Hydroxide | 2 mg/m ³ (ceiling) | 2 mg/m ³ | Not available |
| Sodium Silicate | Not available | Not available | Not available |
| Pentasodium Triphosphate | Not available | Not available | Not available |

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls

General ventilation is usually adequate. Provide eyewash and safety shower if contact or splash hazard exists.

When handling large quantities of concentrated product: use a local exhaust ventilation and enclosure, if necessary, to

control amount in the air.

Individual Protection Measures

Eye/Face Protection

Do not get in eyes. Wear chemical safety goggles.

Skin Protection

Prevent all skin contact. Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Barrier® (PE/PA/PE), Silver Shield/4H® (PE/EVAL/PE), Tychem® Responder, Tychem® TK.

The following materials should NOT be used: neoprene rubber, nitrile rubber, polyvinyl alcohol.

Respiratory Protection

Not normally required if product is used as directed.

Concentrated product: wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an organic vapour

Cartridge, or, wear a NIOSH approved self-contained breathing apparatus (SCBA) or supplied air respirator.

Other Personal Protection Data

Ensure that eyewash stations and safety showers are proximal to the work-station location.

9. CHEMICAL AND PHYSICAL PROPERTIES

| | |
|---|--|
| Appearance | Clear yellow liquid. |
| Odour | Slight Chlorine |
| Odour Threshold | Not available |
| pH | 12.0 – 13.5 |
| Melting Point/Freezing Point | Not Available |
| Initial Boiling Point/Range | Decomposition at 40°C |
| Flash Point | None |
| Evaporation Rate | Not available |
| Flammability (solid, gas) | Not applicable (liquid). |
| Upper/Lower Flammability or Explosive Limit | Not available (upper); Not available (lower) |
| Vapour Pressure | Not available |
| Vapour Density (air = 1) | Not available |
| Relative Density (specific gravity) | 1.05-1.15 at 20°C |
| Solubility | Soluble in water |
| Partition Coefficient, n-Octanol/Water (Log Kow) | Not available |
| Auto-ignition Temperature | Not available |
| Decomposition Temperature | Not available |
| Viscosity | Not available |
| Other Information | |
| Physical State: | Liquid |

10. STABILITY AND REACTIVITY

Reactivity

Greatly increases the burning rate of combustible materials. Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Reacts violently with strong acids. This product may react with oxidizing agents. Hazardous polymerization does not occur.

Conditions to Avoid

High temperatures. Exposure to light.

Incompatible Materials

Oxidizing agents (e.g. peroxides), strong acids, acids, reducing agents (e.g. hydroquinone), combustible material, metals, bases, alkalis (organic).

Hazardous Decomposition Products

Chlorine. Hydrogen chloride.

11. TOXICOLOGICAL INFORMATION**Likely Routes of Exposure**

Inhalation; skin contact; eye contact; ingestion.

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|--------------------------|---------------|----------------------------------|----------------------|
| Sodium hypochlorite | Not available | Rat = 8200 mg/kg | Rabbit > 10000 mg/kg |
| Potassium Hydroxide | Not available | Rat = 214 mg/kg Rat 273 mg/kg | Not available |
| Sodium Hydroxide | Not available | Rabbit = 500mg/kg | Not available |
| Sodium Silicate | Not available | Not available | Not available |
| Pentasodium Triphosphate | Not available | Not available | Not available |

Skin Corrosion/Irritation

May cause severe skin burns.

Serious Eye Damage/Irritation

May cause serious eye damage.

STOT (Specific Target Organ Toxicity) - Single Exposure Inhalation

Not classified.

Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited. Symptoms may include coughing, choking, shortness of breath, difficult or rapid breathing, and wheezing.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Not classified.

Respiratory and/or Skin Sensitization

Not a respiratory sensitizer.

Skin sensitizer. May cause an allergic reaction (skin sensitization) based on information for closely related chemicals.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive Toxicity**Development of Offspring**

This product is not expected to cause developmental effects.

Sexual Function and Fertility

This product is not expected to cause reproductive effects.

Germ Cell Mutagenicity

Not mutagenic.

Interactive Effects

No information was located.

Additional Information

No information was located.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

| Ingredients | Ecotoxicity - Fish Species Data | Acute Crustaceans Toxicity: | Ecotoxicity - Freshwater Algae Data |
|--------------------------|---|-----------------------------|--|
| Sodium hypochlorite | 0.03 - 0.19 mg/L LC50 (Oncorhynchus mykiss) 96 h semi-static 0.05 - 0.771 mg/L LC50 (Oncorhynchus mykiss) 96 h flow-through 0.06 - 0.11 mg/L LC50 (Pimephales promelas) 96 h flow-through 0.18 - 0.22 mg/L LC50 (Oncorhynchus mykiss) 96 h static 0.28 - 1 mg/L LC50 (Lepomis macrochirus) 96 h flowthrough 0.4 - 0.8 mg/L LC50 (Lepomis macrochirus) 96 h static 4.5 - 7.6 mg/L LC50 (Pimephales promelas) 9 | Not available | 0.095 mg/L EC50 Skeletonema costatum 24h |
| Potassium Hydroxide | 80 mg/L LC50 (Gambusia affinis) 96 h static | Not Available | Not Available |
| Sodium Hydroxide | LC50 (Rainbow Trout) 1149 mg/l LC50 (Chinook Salmon) 152 mg/l | Not available | Not available |
| Sodium Silicate | Not Available | Not Available | Not Available |
| Pentasodium Triphosphate | Not Available | Not Available | Not Available |

Other Information:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. Spill areas must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. Biodegrades (slow). Rapid volatilization. Not expected to bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

Burn in an approved incinerator according to federal, provincial/state, and local regulations.

Empty containers retain product residue. Follow label warnings even if container appears to be empty. The container for this product can present explosion or fire hazards, even when emptied. Do not cut, puncture, or weld on or near this container.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: SODIUM HYPOCHLORITE
DOT Hazardous Class 8
DOT UN Number: Not Applicable.
DOT Packing Group: III
DOT Reportable Quantity (lbs): Not Available.
Marine Pollutant: No.

TDG (Canada):
TDG Shipping Name: SODIUM HYPOCHLORITE
Hazard Class: 8
UN Number: Not Applicable.
Packing Group: III
Marine Pollutant: No.

Special Precautions for User
Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. REGULATORY INFORMATION

Canada

WHMIS Classification

E – Corrosive Material

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

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

16. OTHER INFORMATION

Additional Information: This product has been classified in accordance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and the SDS contains all the information required by the Hazardous Products Regulations (HPR).

Prepared by: The Environmental, Health and Safety Department of Genesis Chemicals Ltd

Date of Latest Revision: February 6, 2017

Key to Abbreviations: IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans. ACGIH® = American Conference of Governmental Industrial Hygienists. A4 = Not classifiable as a human carcinogen. NTP = National Toxicology Program. OSHA = US Occupational Safety and Health Administration. ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. TWA = Time-Weighted Average. STEL = Short-term Exposure Limit. A4 = Not classifiable as a human carcinogen. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits. IDLH = Immediately Dangerous to Life and Health.

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*****END OF SDS*****