MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Sodium Hypochlorite 12%      SO300-12

SECTION 01: PRODUCT INFORMATION AND COMPANY INFORMATION

MANUFACTURER: as above
PREPARED BY: Production Department
VERSION DATE: 01-Dec-16
TELEPHONE NO.: (519) 451-1614
EMERGENCY PHONE NO.: (613) 996-6666
CHEMICAL FAMILY: Hydrochlorous Acid
CHEMICAL FORMULA: Na-O-Cl
MOLECULAR WEIGHT: Not Applicable
MATERIAL USE: Please Refer to technical literature
SYNONYMS: Sodium Hypochlorite, Sodium Hypochlorite 12%, Bleach

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredients</th>
<th>Conc. Approx. %</th>
<th>C.A.S. #</th>
<th>LD/50 (RTE/SPEC)</th>
<th>LC/50 (RTE/SPEC)</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hypochlorite</td>
<td>7-13</td>
<td>7681-52-9</td>
<td>5800 mg/kg (Mouse/Oral)</td>
<td>N.Av.</td>
<td>N.Av.</td>
</tr>
</tbody>
</table>

SECTION 03: HAZARD IDENTIFICATION

ROUTE OF ENTRY

Eyes: Extremely hazardous in case of eye contact (irritant).
Skin: Very hazardous. (corrosive, irritant). Skin contact may produce burns.
Inhalation: Hazardous. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.
Ingestion: Very hazardous.

SECTION 04: FIRST AID

Skin Contact: If the chemical gets on the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim’s exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Eye Contact: Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.

Inhalation, Acute: Remove person to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: DO NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are...
damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Notes to physician:** N.Av.

### SECTION 05: FIRE EXPLOSION HAZARD AND FIRE FIGHTING MEASURES

| FLAMMABLE? | No |
| IF YES, UNDER WHICH CONDITIONS? | Not applicable |
| FLASH POINT (TCC) (C) | N. App |
| FLAMMABLE LIMITS: LEL(% BY VOL): | N. App |
| AUTO IGNITION TEMPERATURE (C) | N. App |
| EXTINGUISHING MEDIA | N. App |
| SPECIAL PROCEDURES | N. App |
| HAZARDOUS COMBUSTION PRODUCTS | Not Available |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | Not Available |
| SENSITIVITY TO STATIC DISCHARGE | N. App |
| SENSITIVITY TO MECHANICAL MECHANICAL | N. App |

### SECTION 06: ACCIDENTAL RELEASE MEASURES

**Leak and Spill Procedure:**
- **Small Spill:** Dilute with water and mop up, or absorb with an inert DRY material and place in an appropriate waste disposal container. If necessary: Neutralized the residue with a dilute solution of sodium sulphate or sodium thiosulphate.
- **Large Spill:** Corrosive Liquid! Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium sulphate or hydrogen peroxide.

### SECTION 07: HANDLING AND STORAGE

**Handling Procedures and Storage Requirements**
- Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from direct sunlight or strong incandescent light. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Never add water to this product. Avoid shock and friction. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids.
- Corrosive materials should be stored in a separate safety storage cabinet or room.

### SECTION 08: PERSONAL PROTECTIVE EQUIPMENT / EXPOSURE CONTROLS

**GLOVES/TYPE:** Impervious chemical resistant gloves.
**RESPIRATOR/TYPE:** A NIOSH/MSHA respirator with organic vapor cartridge.
**EYE/TYPE:** Safety glasses.
**OTHER/TYPE:** Rubber boots.

**ENGINEERING CONTROL**
- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective TLV. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

| PHYSICAL STATE/APPEARANCE | Liquid - Green To Yellow |
| ODOUR: Chlorine (strong) | ODOUR THRESHOLD: N. Av. |
| VAPOUR PRESSURE (mm Hg @ 20°C): 17.5 | VAPOUR DENSITY (Air=1): 1 |
| EVAPORATION RATE (Ether = 1): N. Av. | SPECIFIC GRAVITY: 1.16 |
| BOILING POINT (C): Decomp. @ 40 | FREEZING POINT (C): -25 |
| Ph (% SOLUTION): 12.25 | % VOLATILE (WT): N. Av. |
| SOLUBILITY IN WATER (% W/W): Completely | |

### SECTION 10: STABILITY AND REACTIVITY

**CHEMICALLY STABLE?** No
IF NO, UNDER WHICH CONDITIONS?: Under normal conditions: Unstable above 40 C, sunlight, contact with metals. Under Fire conditions: Unstable.

INCOMPATIBILITY WITH OTHER SUBSTANCES Yes

IF YES, WITH WHICH ONES: Reactive with strong acids, reducing materials, oxidizable materials, urea, nickel, copper, tin, manganese, ammonia, iron.

SPECIAL REACTIVITY AND UNDER WHAT CONDITIONS: Hazardous decomposition products: Chlorine (contact with acids)

HAZARDOUS DECOMPOSITION PRODUCTS: N. Av.

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL 0.5 ppm as for chlorine

LC 50 OF MATERIAL, SPECIES AND ROUTE See Sec. 2

LD 50 OF MATERIAL, SPECIES AND ROUTE See Sec. 2

CARCINOGENICITY OF MATERIAL: N. Av.

REPRODUCTIVE EFFECTS: N. Av.

IRRITANCY OF MATERIAL: N. Av.

SENSITIZING CAPABILITY OF MATERIAL N. Av.

SYNERGISTIC MATERIALS: N. Av.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY: N. Av.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Recycle to process, if possible. Consult your local or regional authorities.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION: Class 8, Hypochlorite Solutions

UN NUMBER: 1791

PACKING GROUP: III

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION: D.2B E

SECTION 16: OTHER INFORMATION

ABBREVIATIONS USED: N.Av. = Not Available


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