1 Identification

· Product identifier

· Trade name: CA CLEAN I

· Other means of identification: No other identifiers

· Recommended use and restriction on use

· Recommended use: Diagnostic testing

· Restrictions on use: No relevant information available.

· Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:
  SYMEX AMERICA, Inc
  577 Aptakisic Road
  Lincolnshire, IL 60069 USA
  Phone: 847-996-4500
  1-800-3SYSMEX (1-800-379-7639)

· Emergency telephone number:
  ChemTel Inc.
  (800)255-3924 (North America)
  +1 (813)248-0585 (International)

2 Hazard(s) identification

· Classification of the substance or mixture
  Met. Corr. 1 H290 May be corrosive to metals.
  Skin Corr. 1B H314 Causes severe skin burns and eye damage.
  Eye Dam. 1 H318 Causes serious eye damage.
  STOT SE 3 H335 May cause respiratory irritation.

· Label elements

· GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms:
  
  GHS05 GHS07

· 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 dusts or mists.
Trade name: CA CLEAN I

P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection.
P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep 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/doctor.
P363 Store in a well-ventilated place. Keep container tightly closed.
P403+P233 Store in corrosive resistant container with a resistant inner liner.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:
Contact with acids liberates toxic gas.

Other hazards
There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- Chemical characterization: Mixtures

<table>
<thead>
<tr>
<th>Components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>7681-52-9 sodium hypochlorite</td>
</tr>
<tr>
<td>Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318</td>
</tr>
<tr>
<td>STOT SE 3, H335</td>
</tr>
</tbody>
</table>

Additional information:
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

- Description of first aid measures
  - After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    Provide oxygen treatment if affected person has difficulty breathing.
  - After skin contact:
    Immediately remove any clothing soiled by the product.
    Immediately rinse with water.
    If skin irritation continues, consult a doctor.
    Seek immediate medical help for blistering or open wounds.
  - After eye contact:

(Cont'd. on page 3)
Trade name: CA CLEAN I

Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.

**Most important symptoms and effects, both acute and delayed:**
- Coughing
- Breathing difficulty
- Cramp
- Gastric or intestinal disorders when ingested.
- Nausea in case of ingestion.
- Caustic effect on skin and mucous membranes.
- Irritating to eyes.

**Danger:**
- Causes serious eye damage.
- Danger of impaired breathing.

**Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

---

**5 Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.

**For safety reasons unsuitable extinguishing agents:** None.

**Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.

**Advice for firefighters**

**Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

**Additional information:** Cool endangered receptacles with water spray.

---

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Particular danger of slipping on leaked/spilled product.
Wear protective equipment. Keep unprotected persons away.
Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.

**Environmental precautions**
Do not allow to enter sewers/ surface or ground water.

(Cont’d. of page 2)
Methods and material for containment and cleaning up
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling
Precautions for safe handling:
Open and handle receptacle with care.
Use only in well ventilated areas.
Avoid splashes or spray in enclosed areas.
Avoid contact with the eyes and skin.
Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and receptacles:
Use only receptacles specifically permitted for this substance/product.
Unsuitable material for receptacle: aluminium.
Unsuitable material for receptacle: steel.
Store in cool, dry conditions in well sealed receptacles.

Information about storage in one common storage facility:
Do not store together with acids.
Store away from foodstuffs.
Store away from metals.
Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:

7681-52-9 sodium hypochlorite
WEEL (USA) Short-term value: 2 mg/m³

Exposure controls
General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.

(Cont'd. on page 5)
Trade name: CA CLEAN I

Avoid contact with the eyes and skin.
Avoid breathing mist, vapors, or spray.
· **Engineering controls:** No relevant information available.
· **Breathing equipment:**
  Use suitable respiratory protective device when aerosol or mist is formed.
  For spills, respiratory protection may be advisable.
· **Protection of hands:**
  Protective gloves
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**
  Safety glasses
· **Body protection:** Alkaline resistant protective clothing
· **Limitation and supervision of exposure into the environment**
  No relevant information available.
· **Risk management measures** No relevant information available.

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form:</td>
</tr>
<tr>
<td>Color:</td>
</tr>
<tr>
<td>· Odor:</td>
</tr>
<tr>
<td>· Odor threshold:</td>
</tr>
<tr>
<td>· <strong>pH-value:</strong></td>
</tr>
<tr>
<td>· Melting point/Melting range:</td>
</tr>
<tr>
<td>· Boiling point/Boiling range:</td>
</tr>
<tr>
<td>· Flash point:</td>
</tr>
<tr>
<td>· Flammability (solid, gaseous):</td>
</tr>
<tr>
<td>· Auto-ignition temperature:</td>
</tr>
<tr>
<td>· Decomposition temperature:</td>
</tr>
<tr>
<td>· Danger of explosion:</td>
</tr>
<tr>
<td>· Explosion limits Lower:</td>
</tr>
</tbody>
</table>
### Trade name: CA CLEAN I

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Oxidizing properties:</td>
<td>Non-oxidizing.</td>
</tr>
<tr>
<td>· Vapor pressure:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Density:</td>
<td></td>
</tr>
<tr>
<td>· Relative density:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapor density:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Evaporation rate:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water:</td>
<td>Fully miscible.</td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td></td>
</tr>
<tr>
<td>· Dynamic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Kinematic:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Other information:</td>
<td>No relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity**: Contact with acids releases toxic gases.
- **Chemical stability**:
  - **Thermal decomposition / conditions to be avoided**:
    - No decomposition if used and stored according to specifications.
    - To avoid thermal decomposition, do not overheat.
  - **Possibility of hazardous reactions**
    - Contact with acids releases toxic gases.
    - Reacts with many consumer products, releasing chlorine or chlorine oxide gas.
    - Toxic fumes may be released if heated above the decomposition point.
    - Reacts with strong oxidizing agents.
    - Corrosive action on metals.
- **Conditions to avoid**
  - Excessive heat and contact with acids.
- **Incompatible materials**
  - Caution! Do not use in conjunction with other products. Dangerous gases (chlorine) may be given off.
- **Hazardous decomposition products**
  - Chlorine
  - Hydrogen chloride (HCl)

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**: Based on available data, the classification criteria are not met.
Trade name: CA CLEAN I

LD/LC50 values that are relevant for classification:

7681-52-9 sodium hypochlorite
Oral LD50 5800 mg/kg (mouse)

Primary irritant effect:
On the skin: Strong caustic effect on skin and mucous membranes.
On the eye: Strong caustic effect.
Sensitization: No sensitizing effects known.

IARC (International Agency for Research on Cancer):
None of the ingredients are listed.

NTP (National Toxicology Program):
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients are listed.

Probable route(s) of exposure:
Ingestion.
Inhalation.
Eye contact.
Skin contact.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

12 Ecological information

Toxicity
Aquatic toxicity
Toxic to aquatic life with long lasting effects.

7681-52-9 sodium hypochlorite

LC50 0.58 mg/l (leomis macrochirus)
0.2 mg/l (Oncorhynchus mykiss)
EC50 0.035 mg/l (daphnia)

Persistence and degradability: No relevant information available.
Bioaccumulative potential: No relevant information available.
Mobility in soil: No relevant information available.
Ecotoxicological effects:
Remark:
After neutralization a reduction of the harming action may be recognized
Inhibition of the development of the biomass

(Cont'd. on page 8)
Trade name: CA CLEAN I

Toxic for algae

Additional ecological information
- General notes: Avoid release to the environment.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No relevant information available.

13 Disposal considerations

Waste treatment methods
- Recommendation:
  The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Uncleaned packagings
- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number
- DOT, ADR, IMDG, IATA UN1791

UN proper shipping name
- DOT Hypochlorite solutions
- ADR, IMDG HYPOCHLORITE SOLUTION
- IATA Hypochlorite solution

Transport hazard class(es)
- DOT
  - Class 8 Corrosive substances
  - Label 8
- ADR

(Cont'd. on page 9)
<table>
<thead>
<tr>
<th>Trade name: CA CLEAN I</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cont’d. of page 8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class</th>
<th>8 (C9) Corrosive substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>8</td>
</tr>
<tr>
<td>IMDG, IATA</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>8 Corrosive substances</td>
</tr>
<tr>
<td>Label</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td></td>
</tr>
<tr>
<td>DOT, ADR, IMDG, IATA</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant:</td>
<td>Yes</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Warning: Corrosive substances</td>
</tr>
<tr>
<td>Danger code (Kemler):</td>
<td>80</td>
</tr>
<tr>
<td>EMS Number:</td>
<td>F-A,S-B</td>
</tr>
<tr>
<td>Segregation groups</td>
<td>Hypochlorites</td>
</tr>
<tr>
<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Transport/Additional information:</td>
<td></td>
</tr>
<tr>
<td>DOT</td>
<td>Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.</td>
</tr>
<tr>
<td>Labeling as a Marine Pollutant is only required for bulk single package shipments. Bulk packaging consists of a maximum capacity of greater than 450 L (119 gallons) for a liquid and a maximum net mass greater than 400 kg (882 pounds) for a solid. (See 171.4(c))</td>
<td></td>
</tr>
<tr>
<td>ADR</td>
<td>Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.</td>
</tr>
<tr>
<td>Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to provisions relevant to marine pollutants. (See 5.2.1.8.1)</td>
<td></td>
</tr>
</tbody>
</table>

(Cont’d. on page 10)
Trade name: CA CLEAN I

- IMDG
  Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.
  Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to provisions relevant to marine pollutants. (See 2.10.2.7)

- IATA
  Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.1 L each / 0.5 L net.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - United States (USA)
    SARA
    · Section 302 (extremely hazardous substances):
      None of the ingredients are listed.
    · Section 355 (extremely hazardous substances):
      None of the ingredients are listed.
    · Section 313 (Specific toxic chemical listings):
      None of the ingredients are listed.
    · TSCA (Toxic Substances Control Act)
      All ingredients are listed.
  - Proposition 65 (California)
    · Chemicals known to cause cancer:
      None of the ingredients are listed.
    · Chemicals known to cause reproductive toxicity for females:
      None of the ingredients are listed.
    · Chemicals known to cause reproductive toxicity for males:
      None of the ingredients are listed.
    · Chemicals known to cause developmental toxicity:
      None of the ingredients are listed.
    · EPA (Environmental Protection Agency):
      (Cont’d. on page 11)
None of the ingredients are listed.

- **IARC (International Agency for Research on Cancer):**
  None of the ingredients are listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health):**
  None of the ingredients are listed.

- **Canadian Domestic Substances List (DSL):**
  All ingredients are listed.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** December 21, 2017 / -

**Abbreviations and acronyms:**
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistant, Bio-accumulable, Toxic
- vPvB: very Persistant and very Bioaccumulative
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety & Health Administration
- Met. Corr.1: Corrosive to metals – Category 1
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam.: 1: Serious eye damage/eye irritation – Category 1
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**Sources**
- Website, European Chemicals Agency (echa.europa.eu)
- Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
- Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
- Safety Data Sheets, Individual Manufacturers

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