1 Identification

· Product identifier

· Trade name: CA CLEAN II

· Other means of identification: No other identifiers

· Recommended use and restriction on use

· Recommended use: Diagnostic testing

· Restrictions on use: No relevant information available.

2 Hazard(s) identification

· Classification of the substance or mixture

Met. Corr. 1  H290 May be corrosive to metals.
Eye Irrit. 2B  H320 Causes eye irritation.

· Label elements

· GHS label elements

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

· Hazard pictograms:

\[ \text{GHS05} \]

· Signal word: Warning

· Hazard statements:

H290 May be corrosive to metals.
H320 Causes eye irritation.

· Precautionary statements:

P234  Keep only in original container.
P264  Wash thoroughly after handling.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313  If eye irritation persists: Get medical advice/attention.
P390  Absorb spillage to prevent material damage.

(Cont'd. on page 2)
Trade name: CA CLEAN II

P406 Store in corrosive resistant container with a resistant inner liner.

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

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures**

**Components:**

<table>
<thead>
<tr>
<th>Chemical formula</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>7647-01-0 hydrochloric acid</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

- Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318
- Acute Tox. 4, H302; STOT SE 3, H335

*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.
- **After skin contact:** Wash with soap and water.
  If skin irritation is experienced, consult a doctor.
- **After eye contact:** Remove contact lenses if worn.
  Rinse opened eye for several minutes under running water. If symptoms persist, 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:**

- Slight irritant effect on eyes.
- Gastric or intestinal disorders when ingested.
- Nausea in case of ingestion.

**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**

Formation of toxic gases is possible during heating or in case of fire.
Trade name: CA CLEAN II

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Ensure adequate ventilation.
  Use personal protective equipment as required.
- Environmental precautions
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Methods and material for containment and cleaning up
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose of the collected material according to regulations.

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 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:
  Store in cool, dry conditions in well sealed receptacles.
  Use only receptacles specifically permitted for this substance/product.
  Unsuitable material for receptacle: aluminium.
- Information about storage in one common storage facility: Store away from foodstuffs.
- 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:
Exposure controls

- General protective and hygienic measures:
  The usual precautionary measures for handling chemicals should be followed.
  Keep away from foodstuffs, beverages and feed.
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes.
  Avoid close or long term contact with the skin.
  Avoid breathing mist, vapors, or spray.
- Engineering controls: No relevant information available.
- Breathing equipment:
  Not required under normal conditions of use.
  Use suitable respiratory protective device when aerosol or mist is formed.
  For spills, respiratory protection may be advisable.
- Protection of hands:

  Protective gloves

  Wear protective gloves to handle contents of damaged or leaking units.
  Gloves are advised for repeated or prolonged contact.
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Eye protection:

  Safety glasses

  - Body protection: Protective work clothing
  - Limitation and supervision of exposure into the environment No special requirements.
  - Risk management measures No relevant information available.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- Appearance:

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined.</td>
</tr>
<tr>
<td>pH-value</td>
<td>2.2</td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Danger of explosion</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<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>Not determined.</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**: No relevant information available.
- **Chemical stability**: Not determined.
- **Thermal decomposition / conditions to be avoided**: No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**: Toxic fumes may be released if heated above the decomposition point. Reacts with strong alkali.
CA CLEAN II

Reacts with strong oxidizing agents.
Corrodes aluminium.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** No relevant information available.
- **Hazardous decomposition products** Possible in traces.

---

11 Toxicological information

- **Information on toxicological effects**
  - Acute toxicity: Based on available data, the classification criteria are not met.
  - LD/LC50 values that are relevant for classification: None.
  - Primary irritant effect:
    - On the skin: Based on available data, the classification criteria are not met.
    - On the eye: Slight irritant effect on eyes.
    - 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:**
  - 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: Based on available data, the classification criteria are not met.
  - 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 The product contains materials that are harmful to the environment.
  - Persistence and degradability No relevant information available.
  - Bioaccumulative potential: No relevant information available.
  - Mobility in soil: No relevant information available.

- **Additional ecological information**
  - General notes:
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage

(Cont'd. on page 7)
Trade name: CA CLEAN II

· 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 UN1789
· UN proper shipping name
  · DOT, IATA Hydrochloric acid solution
  · ADR, IMDG HYDROCHLORIC ACID SOLUTION
· Transport hazard class(es)
  · DOT
    · Class 8 Corrosive substances
    · Label 8
  · ADR
    · Class 8 (C1) Corrosive substances
    · Label 8

(Cont’d. on page 8)
Trade name: CA CLEAN II

<table>
<thead>
<tr>
<th>IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Class</td>
</tr>
<tr>
<td>· Label</td>
</tr>
<tr>
<td>· Packing group</td>
</tr>
<tr>
<td>· DOT, ADR, IMDG, IATA</td>
</tr>
<tr>
<td>· Environmental hazards</td>
</tr>
<tr>
<td>· Marine pollutant:</td>
</tr>
<tr>
<td>· Special precautions for user</td>
</tr>
<tr>
<td>· Danger code (Kemler):</td>
</tr>
<tr>
<td>· EMS Number:</td>
</tr>
<tr>
<td>· Segregation groups</td>
</tr>
</tbody>
</table>

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:

· DOT
173.154 Exceptions for Class 8 (corrosive materials). (d) Materials corrosive to aluminum or steel only. Except for a hazardous substance, a hazardous waste, or a marine pollutant, a material classed as a Class 8, Packing Group III, material solely because of its corrosive effect.

(1) On aluminum is not subject to any other requirements of this subchapter when transported by motor vehicle or rail car in a packaging constructed of materials that will not react dangerously with or be degraded by the corrosive material.

· ADR
Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· IMDG
Limited Quantity for packages less than 30 kg gross and inner packagings less than 5 L each.

· IATA
(Cont'd. on page 9)
Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

<table>
<thead>
<tr>
<th>15 Regulatory information</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
</tr>
<tr>
<td>· United States (USA)</td>
</tr>
<tr>
<td>· SARA</td>
</tr>
<tr>
<td>· Section 302 (extremely hazardous substances): None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Section 355 (extremely hazardous substances):</td>
</tr>
<tr>
<td>7647-01-0 hydrochloric acid</td>
</tr>
<tr>
<td>· Section 313 (Specific toxic chemical listings): None of the ingredients are listed.</td>
</tr>
<tr>
<td>· TSCA (Toxic Substances Control Act) All ingredients are listed.</td>
</tr>
<tr>
<td>· Proposition 65 (California)</td>
</tr>
<tr>
<td>· Chemicals known to cause cancer: None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Chemicals known to cause developmental toxicity: None of the ingredients are listed.</td>
</tr>
<tr>
<td>· EPA (Environmental Protection Agency): None of the ingredients are listed.</td>
</tr>
<tr>
<td>· IARC (International Agency for Research on Cancer): None of the ingredients are listed.</td>
</tr>
<tr>
<td>· NIOSH-Ca (National Institute for Occupational Safety and Health): None of the ingredients are listed.</td>
</tr>
<tr>
<td>· Canadian Domestic Substances List (DSL): All ingredients are listed.</td>
</tr>
</tbody>
</table>
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  
  - OSHA: Occupational Safety & Health Administration  
  - Met. Corr.1: Corrosive to metals – Category 1  
  - Acute Tox. 4: Acute toxicity – Category 4  
  - Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
  - Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B  
  - 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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