**acc. to OSHA HCS**

*Printing date 07/28/2021* *Review date 07/27/2021*

* 
## 1 Identification

· **Product identifier**

· **Trade name: STD 10000 MG/L LI IN 5% HCL 500ML**
· **Article number** N9304322
· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

PerkinElmer, Inc.
710 Bridgeport Avenue
Shelton, Connecticut 06484 USA
CustomerCareUS@perkinelmer.com
203-925-4600
· **Emergency telephone number:**
CHEMTREC (within US) 800-424-9300
CHEMTREC (from outside US) +1 703-527-3887 (call collect)
CHEMTREC (within AU) +(61)-290372994

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## 2 Hazard(s) identification

· **Classification of the substance or mixture**

Corrosion

Eye Dam. 1 H318 Causes serious eye damage.

Skin Irrit. 2 H315 Causes skin irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms** GHS05
· **Signal word** Danger

· **Hazard-determining components of labeling:**
Hydrochloric Acid
lithium
· **Hazard statements**
H315 Causes skin irritation.
H318 Causes serious eye damage.
· **Precautionary statements**

| | |
|---|---|
| P264 | Wash thoroughly after handling. |
| P280 | Wear protective gloves / eye protection / face protection. |
| P302+P352 | If on skin: Wash with plenty of water. |
| 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. |
| P321 | Specific treatment (see on this label). |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |

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P332+P313 If skin irritation occurs: Get medical advice/attention.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**


Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**


Health = *3
Fire = 0
Reactivity = 0

· **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

| · **Hazardous components:** | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid<br>Skin Corr. 1B, H314; Eye Dam. 1, H318<br>Acute Tox. 4, H302; STOT SE 3, H335 | 5.0% |
| 7439-93-2 | lithium<br>Water-react. 1, H260<br>Skin Corr. 1B, H314 | 1.0% |

| · **Additional Components** | | |
|---|---|---|
| 7732-18-5 | Water | 94.0% |

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## 4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

## 5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

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## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
· **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.
· **Protective Action Criteria for Chemicals**

| · **PAC-1:** | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid | 1.8 ppm |
| 7439-93-2 | lithium | 3.3 mg/m³ |

| · **PAC-2:** | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid | 22 ppm |
| 7439-93-2 | lithium | 36 mg/m³ |

| · **PAC-3:** | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid | 100 ppm |
| 7439-93-2 | lithium | 220 mg/m³ |

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## 7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about protection against explosions and fires:** No special measures required.

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· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Not required.*
· **Further information about storage conditions:** *Keep receptacle tightly sealed.*
· **Specific end use(s)** *No further relevant information available.*

* 
## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
*The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.*
*At this time, the remaining constituent has no known exposure limits.*

| **7647-01-0 Hydrochloric Acid** | |
|---|---|
| PEL | Ceiling limit value: 7 mg/m³, 5 ppm |
| REL | Ceiling limit value: 7 mg/m³, 5 ppm |
| TLV | Ceiling limit value: 2.98 mg/m³, 2 ppm |

· **Additional information:** *The lists that were valid during the creation were used as basis.*

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
*Keep away from foodstuffs, beverages and feed.*
*Immediately remove all soiled and contaminated clothing.*
*Wash hands before breaks and at the end of work.*
*Avoid contact with the skin.*
*Avoid contact with the eyes and skin.*
· **Breathing equipment:** *Not required.*
· **Protection of hands:**

*Protective gloves*

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*
*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*
· **Material of gloves**
*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*
· **Penetration time of glove material**
*The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.*

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· **Eye protection:**

*Tightly sealed goggles or safety glasses*

* 

## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | *Liquid* |
| **Color:** | *Clear* |
| · **Odor:** | *Characteristic* |
| · **Odor threshold:** | *Not determined.* |
| · **pH-value:** | *Not determined.* |
| · **Change in condition** | |
| **Melting point/Melting range:** | *Undetermined.* |
| **Boiling point/Boiling range:** | *100 °C (212 °F)* |
| · **Flash point:** | *Not applicable.* |
| · **Flammability (solid, gaseous):** | *Not applicable.* |
| · **Decomposition temperature:** | *Not determined.* |
| · **Auto igniting:** | *Product is not selfigniting.* |
| · **Danger of explosion:** | *Product does not present an explosion hazard.*<br>*Not determined.* |
| · **Explosion limits:** | |
| **Lower:** | *Not determined.* |
| **Upper:** | *Not determined.* |
| · **Vapor pressure at 20 °C (68 °F):** | *23 hPa (17.3 mm Hg)* |
| · **Density at 20 °C (68 °F):** | *1.00284 g/cm³ (8.3687 lbs/gal)* |
| · **Relative density** | *Not determined.* |
| · **Vapor density** | *Not determined.* |
| · **Evaporation rate** | *Not determined.* |
| · **Solubility in / Miscibility with** | |
| **Water:** | *Fully miscible.* |
| · **Partition coefficient (n-octanol/water):** | *Not determined.* |
| · **Viscosity:** | |
| **Dynamic:** | *Not determined.* |
| **Kinematic:** | *Not determined.* |
| · **Solvent content:** | |
| **Water:** | *94.0 %* |

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| | |
|---|---|
| **VOC content:** | 0.00 % |
| **Solids content:** | 1.0 % |
| · **Other information** | No further relevant information available. |

## 10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

* 

## 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

| · **IARC (International Agency for Research on Cancer)** | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid | 3 |

| · **NTP (National Toxicology Program)** |
|---|
| None of the ingredients is listed. |

| · **OSHA-Ca (Occupational Safety & Health Administration)** |
|---|
| None of the ingredients is listed. |

* 

## 12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.

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· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

* 
## 13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Dispose of container and materials in accordance with local, regional and national regulations.

· **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** | Hydrochloric acid |
| · **ADR** | 1789 HYDROCHLORIC ACID |
| · **IMDG, IATA** | HYDROCHLORIC ACID |
| · **Transport hazard class(es)** | |
| · **DOT** | |


| | |
|---|---|
| · **Class** | 8 Corrosive substances |
| · **Label** | 8 |
| · **ADR** | |

| | |
|---|---|
| · **Class** | 8 (WC1) Corrosive substances |

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| | |
|---|---|
| · **Label** | 8 |
| · **IMDG, IATA** | |
|  | |
| · **Class** | 8 Corrosive substances |
| · **Label** | 8 |
| · **Packing group** | |
| · **DOT, ADR, IMDG, IATA** | III |
| · **Environmental hazards:** | |
| · **Marine pollutant:** | No |
| · **Special precautions for user** | Warning: Corrosive substances |
| · **EMS Number:** | F-A,S-B |
| · **Segregation groups** | Acids |
| · **Stowage Category** | E |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |
| · **Transport/Additional information:** | |
| · **DOT** | |
| · **Quantity limitations** | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L |
| · **ADR** | |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **IMDG** | |
| · **Limited quantities (LQ)** | 5L |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · **UN "Model Regulation":** | UN 1789 HYDROCHLORIC ACID, 8, III |

* 

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

| | | |
|---|---|---|
| 7732-18-5 | Water | 94.0% |
| 7647-01-0 | Hydrochloric Acid<br>Skin Corr. 1B, H314; Eye Dam. 1, H318<br>Acute Tox. 4, H302; STOT SE 3, H335 | 5.0% |
| 7439-93-2 | lithium<br>Water-react. 1, H260<br>Skin Corr. 1B, H314 | 1.0% |

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· **Sara**

· **Section 355 (extremely hazardous substances):**

| | |
|---|---|
| 7647-01-0 | Hydrochloric Acid |

· **Section 313 (Specific toxic chemical listings):**

| | |
|---|---|
| 7647-01-0 | Hydrochloric Acid |

· **TSCA (Toxic Substances Control Act):**

| | | |
|---|---|---|
| 7732-18-5 | Water | ACTIVE |
| 7647-01-0 | Hydrochloric Acid | ACTIVE |
| 7439-93-2 | lithium | ACTIVE |

· **Hazardous Air Pollutants**

| | |
|---|---|
| 7647-01-0 | Hydrochloric Acid |

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

| | | |
|---|---|---|
| 7647-01-0 | Hydrochloric Acid | A4 |

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

Disclaimer
The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that

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*these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.*

· **Department issuing SDS:** *Environmental, Health and Safety*
· **Contact:**
*Within the USA: 1-(800)-762-4000*
*Outside the USA: 1-(203)-712-8488*
· **Abbreviations and acronyms:**
*ADR: Accord européen sur le transport des marchandises dangereuses par Route (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*
*ACGIH: American Conference of Governmental Industrial Hygienists*
*EINECS: European Inventory of Existing Commercial Chemical Substances*
*ELINCS: European List of Notified Chemical Substances*
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*
*NFPA: National Fire Protection Association (USA)*
*HMIS: Hazardous Materials Identification System (USA)*
*VOC: Volatile Organic Compounds (USA, EU)*
*PBT: Persistent, Bioaccumulative and Toxic*
*vPvB: very Persistent and very Bioaccumulative*
*NIOSH: National Institute for Occupational Safety*
*OSHA: Occupational Safety & Health*
*TLV: Threshold Limit Value*
*PEL: Permissible Exposure Limit*
*REL: Recommended Exposure Limit*
*Water-react. 1: Substances and mixtures which in contact with water emit flammable gases – Category 1*
*Acute Tox. 4: Acute toxicity – Category 4*
*Skin Corr. 1B: Skin corrosion/irritation – Category 1B*
*Skin Irrit. 2: Skin corrosion/irritation – Category 2*
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*
· **** Data compared to the previous version altered.***