# SAFETY DATA SHEET
## Hydrochloric Acid 32 - 36%

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

<table>
<thead>
<tr>
<th>Date issued</th>
<th>19.11.2012</th>
</tr>
</thead>
</table>

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Hydrochloric Acid 32 - 36%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
<td>Saltsyre 32 - 36%</td>
</tr>
<tr>
<td>REACH Reg No</td>
<td>01-2119484862-27</td>
</tr>
<tr>
<td>EC no.</td>
<td>231-595-7</td>
</tr>
</tbody>
</table>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Use of the substance/preparation**: pH regulation. Production of PVC. Acidity substance in food.

### 1.3. Details of the supplier of the safety data sheet

<table>
<thead>
<tr>
<th>Distributor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company name</td>
</tr>
<tr>
<td>Office address</td>
</tr>
<tr>
<td>Postal address</td>
</tr>
<tr>
<td>Postcode</td>
</tr>
<tr>
<td>City</td>
</tr>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Tel</td>
</tr>
<tr>
<td>Fax</td>
</tr>
<tr>
<td>E-mail</td>
</tr>
<tr>
<td>Website</td>
</tr>
<tr>
<td>Enterprise no.</td>
</tr>
<tr>
<td>Contact person</td>
</tr>
</tbody>
</table>

### 1.4. Emergency telephone number

<table>
<thead>
<tr>
<th>Emergency telephone</th>
<th>Toxic Information: 22 59 13 00</th>
</tr>
</thead>
</table>

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>Classification according to 67/548/EEC or 1999/45/EC</th>
<th>Xi; R37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]</td>
<td>C; R34</td>
</tr>
<tr>
<td>Substance / mixture hazardous properties</td>
<td>Causes severe skin burns and eye damage. Irritating to respiratory system.</td>
</tr>
</tbody>
</table>

### 2.2. Label elements

#### Hazard Pictograms (CLP)

- **Composition on the label**: Hydrochloric acid...%; 35 %
- **Signal word**: Danger
Hazard statements

H314 Causes Severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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 or doctor/physician.
P405 Store locked up.

2.3. Other hazards

PBT / vPvB

PBT/vPvB assessment has not been performed.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Component name</th>
<th>Identification</th>
<th>Classification</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>CAS no.: 7732-18-5</td>
<td>EC no.: 231-791-2</td>
<td>65 %</td>
</tr>
<tr>
<td>Hydrochloric acid ...%</td>
<td>EC no.: 231-595-7</td>
<td>Index no.: 017-002-01-X</td>
<td>Synonyms: Hydrogen chloride, gas and aerosol mists</td>
</tr>
</tbody>
</table>

Component comments

See section 16 for explanation of H- and R-phrases listed above.

SECTION 4: First aid measures

4.1. Description of first aid measures

General

If in doubt, seek medical advice.

Inhalation

Remove victim immediately from source of exposure. Fresh air and rest. Rinse nose and mouth with water. Contact physician if irritation continues. For breathing difficulties oxygen may be necessary.

Skin contact

Remove contaminated clothing. Flush skin thoroughly with water. Important to remove the substance from the skin immediately. Get medical attention. Chemical burns must be treated by a physician. Wash contaminated clothes before reuse.

Eye contact

Promptly rinse eyes with plenty of water (tempered at 20-30°C) for at least 15 minutes. Remove contact lenses and open eyes wide apart. Immediately consult a doctor. Transport to physician. Keep on flushing during transport.

Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Drink a few glasses of water or milk. Do not give victim anything to drink if he is unconscious. Immediately consult a doctor. Transport to hospital. Bring the safety data sheet.

4.2. Most important symptoms and effects, both acute and delayed

Information for health personnel

Treat Symptomatically.

Acute symptoms and effects

Corrosive. Forms blisters and can cause ulceration. Corrosive to the eyes, danger of vision impairment / blindness, burning nose, chemical burns to the skin. Causes burns if swallowed. Causes burning sensation in the mouth, throat and esophagus. May cause serious permanent damage. Inhalation: The product irritates the airways and can cause itching, burning and cough. May cause chemical burns to the respiratory tract.

Delayed symptoms and effects

Prolonged or repeated exposure can cause permanent damage.

4.3. Indication of any immediate medical attention and special treatment needed

Other Information

Splashes in the eyes and ingestion of more than an insignificant amount requires immediate medical attention. Corrosive burns on the skin must be treated as thermal burns.
SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.
Improper extinguishing media Do not use water jet.

5.2. Special hazards arising from the substance or mixture
Fire and explosion hazards The product is not classified as flammable.

5.3. Advice for firefighters
Personal protective equipment Use compressed air equipment when the product is involved in fire. In case of evacuation, an approved protection mask should be used. See also section 8.
Other Information Containers close to fire should be removed immediately or cooled with water. Spill water from fire fighting may be strongly caustic.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions Use protective equipment as referred to in section 8. Provide adequate ventilation. Avoid inhalation of spray mist and contact with skin and eyes.

6.2. Environmental precautions
Environmental precautions Do not allow to enter into sewer, water system or soil.

6.3. Methods and material for containment and cleaning up
Methods for cleaning Absorb in vermiculite, dry sand or earth and place into containers. Collect in a suitable container and dispose as hazardous waste according to section 13.
Cleaning up Limit spread of spilled material.

6.4. Reference to other sections
Other instructions See also sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Handling Use protective equipment as referred to in section 8. Provide adequate ventilation. Avoid inhalation of vapours/spray and contact with skin and eyes. Avoid direct contact. Never pour water into acid/base. Dilute by slowly pouring the product into water while stirring. Be aware of the risk of exothermic reactions. Immediately change contaminated clothes.

Protective Measures
Advice on general occupational hygiene Wash hands at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke during work.

7.2. Conditions for safe storage, including any incompatibilities
Storage Store in a tightly closed container in a cool, well-ventilated room, protected from direct sunlight. Store in a dry place. Corrosive storage.
Hints on storage assembly Keep away from: Bases/alkalies (organic). Bases/alkalies (inorganic).

7.3. Specific end use(s)
Specific use(s) See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Other Information about threshold limit values

CAS-nr.:7647-01-0 has got note T.

T = ceiling value

### Exposure limit values

<table>
<thead>
<tr>
<th>Component name</th>
<th>Identification</th>
<th>Value</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride (gas and aerosol mists)</td>
<td>CAS no.: 7647-01-0&lt;br&gt;EC no.: 231-595-7</td>
<td>8 h.: 5 ppm&lt;br&gt;8 h.: 7 mg/m³</td>
<td>2011</td>
</tr>
</tbody>
</table>

### 8.2. Exposure controls

#### Occupational exposure controls

Provide adequate ventilation. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

#### Respiratory protection

In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment with combination filter (type B2/P2). Self-contained breathing apparatus.

#### Hand protection

Use chemical resistant gloves.

- Breakthrough time: Penetration time is not known. The recommended material of gloves is recommended after a study of the single components in the product.

#### Eye / face protection

Use approved safety goggles or face shield.

#### Skin protection

Wear appropriate clothing to prevent any possibility of skin contact.

- Additional skin protection measures: Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes wet or contaminated.

### Other Information

Eye wash facilities and emergency shower should be available when handling this product. The listed protective equipment is a recommendation. A risk assessment of the actual risk may lead to other requirements.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Colour</th>
<th>Odour</th>
<th>Comments, Odour limit</th>
<th>pH (as supplied)</th>
<th>Melting point/melting range</th>
<th>Comments, Melting point / melting range</th>
<th>Boiling point / boiling range</th>
<th>Comments, Flash point</th>
<th>Comments, Evaporation rate</th>
<th>Flammability (solid, gas)</th>
<th>Comments, Explosion limit</th>
<th>Vapour pressure</th>
<th>Comments, Vapour density</th>
<th>Specific gravity</th>
<th>Comments, Specific gravity</th>
<th>Solubility in water</th>
</tr>
</thead>
</table>
Comment, Solubility
Soluble in: Alcohol.

Comments, Partition coefficient: n-octanol / water
Not known.

Comments, Spontaneous combustibility
Not known.

Comments, Decomposition temperature
Not known.

Comments, Viscosity
Not known.

Physical hazards
Explosive properties
Not known.

Oxidising properties
Not known.

9.2. Other information

Other physical and chemical properties

Physical and chemical properties
Not known.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
Reactive with the materials listed in Section 10.5.

10.2. Chemical stability
Stability
Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
Arise in contact with incompatible materials (section 10.5) and inappropriate conditions (section 10.4).

10.4. Conditions to avoid
Conditions to avoid
Do not add water directly to the product. It may cause a violent reaction. Generates heat upon contact with water.

10.5. Incompatible materials
Materials to avoid
Bases, alkalis (organic). Bases, alkalis (inorganic).

10.6. Hazardous decomposition products
Hazardous decomposition products
None under normal conditions. See also section 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological Information:

LD50 oral
Value: 900 mg/kg
Test animal species: Rat
Comments: (25% solution).

Other information regarding health hazards

General
This substance is corrosive.

Potential acute effects

Inhalation
Irritating to respiratory system. Vapours are corrosive. After 24-36 hours, injured persons may develop serious shortness of breath and lung oedema.

Skin contact
Corrosive. Prolonged contact causes serious tissue damage. Cause blisters and burns.

Eye contact
Corrosive. Immediate first aid is necessary. Risk of serious damage to eyes. Risk of permanent corneal damage, loss of sight and blindness.

Ingestion
Causes burns if swallowed. Causes burning sensation in the mouth, throat and oesophagus. May cause serious permanent damage. May cause burns in mucous membranes, throat, oesophagus and stomach.

Aspiration hazard
Not classified with respect to aspiration toxicity. The classification criteria are not met.
Delayed effects / repeated exposure

Sensitisation

None of the substances mentioned in section 3 is considered to have sensitizing effects according to current labelling rules.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity

None of the substances mentioned in section 3 is considered as carcinogenic according to current labelling rules.

Mutagenicity

None of the substances mentioned in section 3 are considered to have mutagenic or pro-mutagenic effects.

Teratogenic properties

None of the substances mentioned in section 3 are considered to cause harm to the unborn child.

Reproductive toxicity

None of the substances mentioned in section 3 are considered to have genotoxic effects.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

The product is not classified as dangerous for the environment. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms. Evaluate the necessity of neutralization.

12.2. Persistence and degradability

Persistence and degradability

The product contains inorganic compounds that are not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

Product is not expected to be bioaccumulative.

12.4. Mobility in soil

Mobility

The product is soluble in water.

12.5. Results of PBT and vPvB assessment

PBT assessment results

PBT assessment has not been performed.

vPvB evaluation results

vPvB assessment has not been performed.

12.6. Other adverse effects

Other adverse effects / Remarks

Acids cause decreased pH values in the water. A low pH value harms aquatic organisms. Do not allow to enter into sewer, water system or soil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Specify the appropriate methods of disposal

Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned above.

Product classified as hazardous waste

Yes

EWC waste code

EWC: 06 01 02 hydrochloric acid

NORSAS

7131 Acids, inorganic.

SECTION 14: Transport information

14.1. UN number

ADR 1789
RID 1789
IMDG 1789
ICAO/IATA 1789

14.2. UN proper shipping name

ADR HYDROCHLORIC ACID
RID HYDROCHLORIC ACID
IMDG HYDROCHLORIC ACID
14.3. Transport hazard class(es)
ADR 8
Hazard no. 80
RID 8
IMDG 8
ICAO/IATA 8

14.4. Packing group
ADR III
RID III
IMDG III
ICAO/IATA III

14.5. Environmental hazards
IMDG Marine pollutant No

14.6. Special precautions for user
ADR Other applicable information Classification code: C1
EmS F-A, S-B

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Other applicable information. Not relevant.

SECTION 15: Regulatory information
EC no. 231-595-7

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
References (laws/regulations)
- Regulation on classification, labeling and packaging of substances and mixtures (CLP) dated 16.06.2012.
- Administrative norms for pollution of the atmosphere, the latest edition, from Norwegian labour inspection authority
- Dangerous Goods regulations

Declaration no. 302131

The Safety Data Sheet is based on information provided by the producer.

15.2. Chemical safety assessment
Chemical safety assessment has been carried out No

SECTION 16: Other information
Supplier's notes The information contained in this SDS must be made available to all those who handle the product.

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
- Skin Corr 1B; H314;
- STOT SE3; H335;

List of relevant R phrases (under GHS) R34 Causes burns.
<table>
<thead>
<tr>
<th>Headings 2 and 3)</th>
<th>R37 Irritating to respiratory system.</th>
</tr>
</thead>
</table>
| List of relevant H-phrases (Section 2 and 3). | H314 Causes Severe skin burns and eye damage.  
|                  | H335 May cause respiratory irritation.  |
| Abbreviations and acronyms used | PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
LD50: Lethal dose, is the amount of a substance given to a group of test animals, which causes the death of 50%. |
| Sources of key data used to compile the safety data sheet | Suppliers Safety data sheet dated: 06.01.2011 |
| Information which has been added, deleted or revised | New Safety Data Sheet. |
| Checking quality of information | This SDS is quality controlled by National Institute of Technology in Norway, certified according to the Quality Management System requirements specified in ISO 9001:2008. |
| Responsible for safety data sheet | Acinor AS |
| Prepared by | National Institute of Technology as, Norway v/ Camilla M. Ormset |