1 Identification
Product identifier
Product name: Sodium chloride
Stock number: 43631
CAS Number: 7647-14-5
EC number: 231-598-3

Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24  Scientific research and development

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department
Emergency telephone number:
During normal hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification
Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
The substance is not classified as hazardous to health or the environment according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC Not applicable
Information concerning particular hazards for human and environment:
Not applicable
No information known.

Hazards not otherwise classified No information known.

Label elements
Labelling according to Regulation (EC) No 1272/2008 Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
WHMIS classification Not controlled
Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FIRE</th>
<th>REACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

Health (acute effects) = 1
Flammability = 0
Physical Hazard = 0

Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients
Chemical characterization: Substances
CAS# Description:
7647-14-5 Sodium chloride
Identification number(s):
EC number: 231-598-3

4 First-aid measures
Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

(Contd. on page 2)
**Product name:** Sodium chloride

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**5 Fire-fighting measures**

**Extinguishing media**
- Suitable extinguishing agents
  - Product is not flammable. Use fire fighting measures that suit the surrounding fire.

**Special hazards arising from the substance or mixture**
- If this product is involved in a fire, the following can be released:
  - Hydrogen chloride (HCl)
  - Sodium oxide

**Advice for firefighters**
- Protective equipment:
  - Wear self-contained respirator.
  - Wear fully protective impervious suit.

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**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**
- Wear protective equipment. Keep unprotected persons away.
- Ensure adequate ventilation.

**Environmental precautions:**
- Do not allow material to be released to the environment without proper governmental permits.
- Do not allow product to reach sewage system or any water course.
- Do not allow to penetrate the ground/soil.

**Methods and material for containment and cleaning up:**
- Pick up mechanically.

**Prevention of secondary hazards:**
- No special measures required.

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**7 Handling and storage**

**Handling**
- Precautions for safe handling
  - Keep container tightly sealed.
  - Store in cool, dry place in tightly closed containers.

**Information about protection against explosions and fires:** The product is not flammable.

**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:**
- Store away from water/moisture.

**Further information about storage conditions:**
- This product is hygroscopic.
- Store under dry inert gas.
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.
- Protect from humidity and water.

**Specific end use(s)**
- No further relevant information available.

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**8 Exposure controls/personal protection**

**Additional information about design of technical systems:**
- Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Control parameters**
- Components with limit values that require monitoring at the workplace:
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** No data
38.0.35

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Maintain an ergonomically appropriate working environment.

Breathing equipment: Use suitable respirator when high concentrations are present.

Protection of hands:

Imperious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Crystalline

Color: White

Odor: Odorless

Odor threshold: Not determined.

pH-value (50 g/l) at 20 °C (68 °F): 6-9

Change in condition

Melting point/Melting range: 801 °C (1474 °F)

Boiling point/Boiling range: 1413 °C (2575 °F)

Sublimation temperature / start: Not determined

Flammability (solid, gaseous): Not determined

Ignition temperature:

Decomposition temperature:

Auto igniting:

Danger of explosion: Not determined.

Explosion limits:

Lower: Not determined

Upper: Not determined

Vapor pressure: Not applicable

Density at 20 °C (68 °F): 2.165 g/cm³ (18.067 lbs/gal)

Relative density: Not determined.

Vapor density: Not applicable

Evaporation rate: Not applicable

Solubility in / Miscibility with

Water at 20 °C (68 °F): 358 g/l

Partition coefficient (n-octanol/water): Not determined

Viscosity:

dynamic: Not applicable

kinematic: Not applicable

Other information: No further relevant information available.

10 Stability and reactivity

Reactivity: No information known.

Chemical stability: Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions: No dangerous reactions known

Incompatible materials: Water/moisture

Hazardous decomposition products: Sodium oxide
11 Toxicological information

Information on toxicological effects

Acute toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

<table>
<thead>
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<th>Route</th>
<th>LD50/LC50</th>
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</thead>
<tbody>
<tr>
<td>Oral</td>
<td>3000 mg/Kg (rat)</td>
</tr>
</tbody>
</table>

Skin irritation or corrosion: No irritant effect.
Eye irritation or corrosion: May cause irritation.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity:
The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Carcinogenic categories
OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Do not allow material to be released to the environment without proper governmental permits.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Avoid transfer into the environment.
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: Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

<table>
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<table>
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<th>Transport hazard class(es)</th>
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<td></td>
</tr>
</tbody>
</table>

Class: Not applicable.
Product name: Sodium chloride

15 Regulatory information

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

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
All components of this product are listed on the Canadian Domestic Substances List (DSL).
SARA Section 313 (specific toxic chemical listings) Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
REACH - Pre-registered substances Substance is listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Health, Safety and Environmental Department.
Date of preparation / last revision 05/16/2014 / -

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
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
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)