1 Identification

Product identifier
Product name: 4-Chlorobenzoic acid
Stock number: A15135, L03857
CAS Number: 74-11-3
EC number: 200-805-9

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
Thermo Fisher Scientific Chemicals, 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 business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)

GHS07
Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.
Hazards not otherwise classified No information known.

Label elements
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Hazard pictograms

GHS07

Signal word Warning
Hazard statements
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P280 Wear protective gloves / protective clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

WHMIS classification
D2B - Toxic material causing other toxic effects

Classification system
HMIS ratings (scale 0-4)
(Hazardous Materials Identification System)

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

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

3 Composition/information on ingredients

Chemical characterization: Substances
CAS# Description:
74-11-3 4-Chlorobenzoic acid
Identification number(s):
EC number: 200-805-9

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.

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

(Contd. on page 2)
Product name: 4-Chlorobenzoic acid

After swallowing
Seek medical treatment.

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

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

5 Fire-fighting measures

Extinguishing media
Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Suitable extinguishing agents
Carbon monoxide and carbon dioxide
Hydrogen chloride (HCl)

Advice for firefighters
Wear self-contained respirator.
Wear fully protective impervious suit.

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.

Dispose of contaminated material as waste according to section 13.

Ensure adequate ventilation.

Prevention of secondary hazards
No special measures required.

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
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

Information about protection against explosions and fires
No information known.

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 oxidizing agents.

Further information about storage conditions
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

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

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.

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.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment
Use suitable respirator when high concentrations are present.

Recommended filter device for short term use
Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands
Impervious 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.

Penetration time of glove material (in minutes)
Not determined

Eye protection
Safety glasses

Body protection
Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information
Appearance:
Crystalline powder
Color:
White to pale cream
Odor:
Odorless
Odor threshold:
Not determined.

pH-value:
Not applicable.

Change in condition
Melting point/Melting range: 239-243 °C (462-469 °F)
Boiling point/Boiling range: 275 °C (527 °F)
### 3.7 Sublimation 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:**
Reacts with strong oxidizing agents

**Conditions to avoid:**
No further relevant information available.

**Incompatible materials:**
Oxidizing agents

**Hazardous decomposition products:**
Carbon monoxide and carbon dioxide

Hydrogen chloride (HCl)

### 11.2 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**
Harmful if swallowed.

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>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1170 mg/kg (rat)</td>
</tr>
</tbody>
</table>

**Skin irritation or corrosion:**
Causes skin irritation.

**Eye irritation or corrosion:**
Causes serious eye irritation.

**Sensitization:**
No sensitizing effects known.

**Germ cell mutagenicity:**
No effects known.

**Carcinogenicity:**
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**Reproductive toxicity:**
No effects known.

**Specific target organ system toxicity - repeated exposure:**
No effects known.

**Specific target organ system toxicity - single exposure:**
May cause respiratory irritation.

**Aspiration hazard:**
No effects known.

**Subacute to chronic toxicity:**
No effects known.

**Additional toxicological information:**
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

### 13.1 Disposal considerations

**Waste treatment methods**

**Recommendation:**
Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packaging:**

**Recommendation:**
Disposal must be made according to official regulations.

### 14 Transport information

**UN-Number**

| DOT, ADN, IMDG, IATA | Not applicable |

**UN proper shipping name**

| DOT, ADN, IMDG, IATA | Not applicable |

**Transport hazard class(es)**

| DOT, ADN, IMDG, IATA | Not applicable |

**Class**

Not applicable
Safety Data Sheet
per OSHA HazCom 2012

Product name: 4-Chlorobenzoic acid

15 Regulatory information
Safety, health and environmental regulations/legislation specific for the substance or mixture
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms

GHS07

Signal word Warning
Hazard statements
H302 Harmful if swallowed.
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Precautionary statements
P280 Wear protective gloves / protective clothing.
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DOT
Marine Pollutant (DOT): No

UN "Model Regulation": -

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: Global Marketing Department
Date of preparation / last revision 11/23/2015 / -

Abbreviations and acronyms:
ADE: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR: ADR, Department of Transportation
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)