

**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Revision: 14.07.2010

Printing date 14.07.2010

**1 Identification of substance****Product details****Trade name****2-Chlorothiophene****Stock number:**

A10390, L02136

**Manufacturer/Supplier:**Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com**Informing department:**

Product safety department.

**Emergency information:**Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification****Hazard designation:**

T Toxic

**Information pertaining to particular dangers for man and environment**R 10 Flammable.  
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.**GHS label elements****Danger**

H225 - Highly flammable liquid and vapour.

**Danger**H301 - Toxic if swallowed.  
H311 - Toxic in contact with skin.  
H330 - Fatal if inhaled.**Response:**P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.P320 Specific treatment is urgent (see on this label).  
P361 Remove/Take off immediately all contaminated clothing.**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**3 Composition/information on ingredients****Chemical characterization:****Designation: (CAS#)**

2-Chlorothiophene (CAS# 96-43-5): 100%

**Identification number(s):**

EINECS Number: 202-505-3

**4 First aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.

**After skin contact**

Instantly 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 doctor.

**After swallowing**

Seek immediate medical advice.

**5 Fire fighting measures****Suitable extinguishing agents**

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

**For safety reasons unsuitable extinguishing agents**

Water.

**Special hazards caused by the material, its products of combustion or flue gases:**Can be released in case of fire:  
Carbon monoxide and carbon dioxide  
Sulphur oxides (SO<sub>x</sub>)  
Hydrogen chloride (HCl)**Protective equipment:**Wear self-contained breathing apparatus.  
Wear full protective suit.**6 Accidental release measures****Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

**Measures for environmental protection:**

Ensure adequate ventilation

Keep away from ignition sources

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Keep away from ignition sources.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**Additional information:****7 Handling and storage****Handling****Information for safe handling:**Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.**Information about protection against explosions and fires:**Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.**Storage****Requirements to be met by storerooms and containers:**

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.

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**8 Exposure controls and personal protection**

<b>Additional information about design of technical systems:</b>	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
<b>Components with critical values that require monitoring at the workplace:</b>	Not required.
<b>Additional information:</b>	No data
<b>Personal protective equipment</b>	
<b>General protective and hygienic measures</b>	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
<b>Breathing equipment:</b>	Use breathing protection with high concentrations.
<b>Eye protection:</b>	Safety glasses
<b>Body protection:</b>	Face protection Protective work clothing.

**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Smell:</b>	Unpleasant
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	-72°C
<b>Boiling point/Boiling range:</b>	128-129°C
<b>Sublimation temperature / start:</b>	Not determined
<b>Flash point:</b>	22°C
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Critical values for explosion:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Steam pressure at 20°C:</b>	10.662 hPa
<b>Density at 20°C</b>	1.285 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix
<b>Viscosity:</b>	
<b>dynamic at 30°C:</b>	0.8 mPas

**10 Stability and reactivity**

<b>Thermal decomposition / conditions to be avoided:</b>	No decomposition if used and stored according to specifications.
<b>Materials to be avoided:</b>	Oxidizing agents
<b>Dangerous reactions:</b>	No dangerous reactions known
<b>Dangerous products of decomposition:</b>	Carbon monoxide and carbon dioxide Sulphur oxides (SO <sub>x</sub> ) Hydrogen chloride (HCl)

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral | LD50 | 129-516 mg/kg (rat)

**Primary irritant effect:**

<b>on the skin:</b>	May cause irritation
<b>on the eye:</b>	May cause irritation
<b>Sensitization:</b>	No sensitizing effect known.
<b>Additional toxicological information:</b>	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Danger by skin resorption. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****Additional ecological information:**

<b>General notes:</b>	Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits.
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**13 Disposal considerations**

<b>Product:</b>	
<b>Recommendation</b>	Consult state, local or national regulations for proper disposal. Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations.
<b>Uncleaned packagings:</b>	
<b>Recommendation:</b>	Disposal must be made according to official regulations.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

<b>ADR/RID-GGVS/E Class:</b>	3 (FT1) Flammable liquids.
<b>Kemler Number:</b>	36

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**UN-Number:** 1992  
**Packaging group:** III  
**Label:** 3+6.1  
**Designation of goods:** 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (2-Chlorothiophene)  
**Limited quantities (LQ):** LQ7  
**Transport category:** 3  
**Tunnel restriction code:** D/E

**Maritime transport IMDG/GGVSea:**

**IMDG/GGVSea Class:** 3  
**UN Number:** 1992  
**Label:** 3+6.1  
**Packaging group:** III  
**Marine pollutant:** No  
**Correct technical name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (2-Chlorothiophene)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 3  
**UN/ID Number:** 1992  
**Label:** 3+6.1  
**Packaging group:** III  
**Correct technical name:** FLAMMABLE LIQUID, TOXIC, N.O.S. (2-Chlorothiophene)

**UN "Model Regulation":** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S., 3 (6.1), III

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

T Toxic

**Risk phrases:**

10 Flammable.  
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

**Safety phrases:**

28 After contact with skin, wash immediately with plenty of soap and water.  
36/37 Wear suitable protective clothing and gloves.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**National regulations****Information about limitation of use:**

Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**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 data specification sheet:** Health, Safety and Environmental Department.

**Contact:** Zachariah Holt

**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)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organization  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
 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)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent