

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 22.08.2010

Revision: 22.08.2010

## 1 Identification of substance

### Product details

Trade name

**4-Chloro-3-nitrophenyl isothiocyanate**

Stock number:

L10506

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:



C Corrosive

Information pertaining to particular dangers for man and environment

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
R 34 Causes burns.

GHS label elements



Danger

H314 - Causes severe skin burns and eye damage.



Warning

H302 - Harmful if swallowed.  
H312 - Harmful in contact with skin.  
H332 - Harmful if inhaled.

Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

Response:

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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#)

4-Chloro-3-nitrophenyl isothiocyanate (CAS# 127142-66-9):  
100%

## 4 First aid measures

General information

Instantly remove any clothing soiled by the product.

After inhalation

Supply fresh air; consult doctor in case of symptoms.

After eye contact

Rinse opened eye for several minutes under running water.

After swallowing

Seek immediate medical advice.

## 5 Fire fighting measures

Suitable extinguishing agents

CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

Special hazards caused by the material, its products of combustion or flue gases:

Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
Sulphur oxides (SO<sub>x</sub>)  
Hydrogen chloride (HCl)  
Can be released in case of fire:

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.  
Ensure adequate ventilation

Measures for environmental protection:

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

Measures for cleaning/collecting:

Use neutralizing agent.  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

## 7 Handling and storage

Handling

Information for safe handling:

Handle under dry protective gas.  
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.

Storage  
Requirements to be met by storerooms and containers:  
Information about storage in one common storage facility:

No special requirements.

Store away from water.  
Store away from oxidizing agents.

Further information about storage conditions:

Store under dry inert gas.  
This product is moisture sensitive.  
Protect from humidity and keep away from water.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.

## 8 Exposure controls and personal protection

Components with critical values that require monitoring at the workplace:

Not required.

(Contd. on page 2)  
GB

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<b>Additional information:</b>	No data	(Contd. of page 1)
<b>Personal protective equipment</b>		
<b>General protective and hygienic measures</b>	The usual precautionary measures should be adhered to in handling the chemicals. Avoid contact with the eyes and skin.	
<b>Protection of hands:</b>		
<b>Material of gloves</b>	Impervious gloves	
<b>Penetration time of glove material</b>	Not determined	
<b>Eye protection:</b>	Safety glasses Tightly sealed safety glasses. Face protection Full face protection	
<b>Body protection:</b>	Protective work clothing.	

**9 Physical and chemical properties:**

<b>General Information</b>		
<b>Form:</b>	Powder	
<b>Colour:</b>	Yellow	
<b>Smell:</b>	Irritant	
<b>Change in condition</b>		
<b>Melting point/Melting range:</b>	95-99°C	
<b>Boiling point/Boiling range:</b>	Not determined	
<b>Sublimation temperature / start:</b>	Not determined	
<b>Flash point:</b>	Not applicable	
<b>Ignition temperature:</b>	Not determined	
<b>Decomposition temperature:</b>	Not determined	
<b>Danger of explosion:</b>	Product is not explosive.	
<b>Critical values for explosion:</b>		
<b>Lower:</b>	Not determined	
<b>Upper:</b>	Not determined	
<b>Steam pressure:</b>	Not determined	
<b>Density</b>	Not determined	
<b>Solubility in / Miscibility with Water:</b>	Hydrolyzes	

**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>	Water/moisture Oxidizing agents
<b>Dangerous reactions:</b>	No dangerous reactions known
<b>Dangerous products of decomposition:</b>	Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Hydrogen cyanide (prussic acid) Sulphur oxides (SOx) Hydrogen chloride (HCl)

**11 Toxicological information**

<b>Acute toxicity:</b>	
<b>Primary irritant effect:</b>	
<b>on the skin:</b>	Corrosive effect on skin and mucous membranes.
<b>on the eye:</b>	Strong corrosive effect. Lachrymatory effect.
<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. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.


**12 Ecological information:**

<b>Additional ecological information:</b>	
<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.

**13 Disposal considerations**

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

**14 Transport information**

<b>Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)</b>	
	
<b>ADR/RID-GGVS/E Class:</b>	8 (CT2) Corrosive substances.
<b>Kemler Number:</b>	86
<b>UN-Number:</b>	2923
<b>Packaging group:</b>	III
<b>Label</b>	8+6.1
<b>Designation of goods:</b>	2923 CORROSIVE SOLID, TOXIC, N.O.S. (4-Chloro-3-nitrophenyl isothiocyanate)

(Contd. on page 3)  
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(Contd. of page 2)

Limited quantities (LQ) LQ24  
 Transport category 3  
 Tunnel restriction code E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class: 8  
 UN Number: 2923  
 Label: 8+6.1  
 Packaging group: III  
 EMS Number: F-A,S-B  
 Marine pollutant: No  
 Correct technical name: CORROSIVE SOLID, TOXIC, N.O.S. (4-Chloro-3-nitrophenyl isothiocyanate)

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 8  
 UN/ID Number: 2923  
 Label: 8+6.1  
 Packaging group: III  
 Correct technical name: CORROSIVE SOLID, TOXIC, N.O.S. (4-Chloro-3-nitrophenyl isothiocyanate)

UN "Model Regulation":  
 UN2923, CORROSIVE SOLID, TOXIC, N.O.S., 8 (6.1), III

## 15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



C Corrosive

Risk phrases: 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
 34 Causes burns.

Safety phrases: 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
 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: For use only by technically qualified individuals.  
 Employment restrictions concerning young persons must be observed.

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  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)