

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

Revision: 15.07.2010

Printing date 15.07.2010

1 Identification of substance**Product details**

Trade name

1-Propyl isothiocyanate

Stock number:

A14499, L02599

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 10 Flammable.
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**

H226 - Flammable liquid and vapour.

**Warning**H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H332 - Harmful if inhaled.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

Prevention:

Response:

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#)

1-Propyl isothiocyanate (CAS# 628-30-8): 100%

Identification number(s):

211-035-8

EINECS Number:

4 First aid measures

General information

Instantly remove any clothing soiled by the product.

After inhalation

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

After skin contact

Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.
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

CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents

Water.

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

Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Sulphur oxides (SO_x)

Protective equipment:

Can be released in case of fire:
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).

Use neutralizing agent.

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

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:

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.
Protect against electrostatic charges.
Fumes can combine with air to form an explosive mixture.(Contd. on page 2)
GB

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

Revision: 15.07.2010

Printing date 15.07.2010

Trade name **1-Propyl isothiocyanate**

(Contd. of page 1)

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

No special requirements.
Store away from oxidizing agents.
Store away from water.

Further information about storage conditions:

Store under dry inert gas.
This product is moisture sensitive.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
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

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.

Components with critical values that require monitoring at the workplace:
Additional information:

Not required.
No data

Personal protective equipment
General protective and hygienic measures

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.

Breathing equipment:
Protection of hands:
Material of gloves

Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material
Eye protection:

Impervious gloves
Not determined
Safety glasses
Tightly sealed safety glasses.
Face protection
Full face protection
Protective work clothing.

Body protection:

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

Form: Liquid
Colour: Colourless
Smell: Pungent

Change in condition

Melting point/Melting range: Not determined
Boiling point/Boiling range: 152-154°C
Sublimation temperature / start: Not determined

Flash point: 46°C

Ignition temperature: Not determined

Decomposition temperature: Not determined

Critical values for explosion:

Lower: Not determined
Upper: Not determined

Steam pressure: Not determined

Density at 20°C 0.977 g/cm³

Solubility in / Miscibility with

Water: Hydrolyzes

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:
Materials to be avoided:

No decomposition if used and stored according to specifications.
Water/moisture
Alcohols
Amines

Dangerous reactions:

Dangerous products of decomposition:

Oxidizing agents
No dangerous reactions known
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Sulphur oxides (SOx)
Hydrogen cyanide (prussic acid)

11 Toxicological information

Acute toxicity:
Primary irritant effect:
on the skin:
on the eye:

Corrosive effect on skin and mucous membranes.
Strong corrosive effect.
Lachrymatory effect.

Sensitization:

Additional toxicological information:

No sensitizing effect known.
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.

GB
(Contd. on page 3)

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

Printing date 15.07.2010

Revision: 15.07.2010

Trade name **1-Propyl isothiocyanate**

(Contd. of page 2)

12 Ecological information:

Additional ecological information:
General notes:

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

Product:
Recommendation

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.

Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

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

ADR/RID-GGVS/E Class: 3 (FC) Flammable liquids.
Kemler Number: 38
UN-Number: 2924
Packaging group: III
Label: 3+8
Designation of goods: 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (1-Propyl isothiocyanate)
Limited quantities (LQ): LQ7
Transport category: 3
Tunnel restriction code: D/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 3
UN Number: 2924
Label: 3+8
Packaging group: III
Marine pollutant: No
Correct technical name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (1-Propyl isothiocyanate)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 3
UN/ID Number: 2924
Label: 3+8
Packaging group: III
Correct technical name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (1-Propyl isothiocyanate)

UN "Model Regulation":

UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S., 3 (8), III

15 Regulatory information**Designation according to EC guidelines:**

Code letter and hazard designation of product:



C Corrosive

Risk phrases:

10 Flammable.
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
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)