

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

Revision: 15.12.2008

Printing date 14.07.2010

1 Identification of substance**Product details**

Trade name

2,4,6-Collidine

Stock number:

A11058, L01936

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:



Xn Harmful

Information pertaining to particular dangers for man and environment

R 10 Flammable.
R 21/22 Harmful in contact with skin and if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.

GHS label elements

**Warning**

H226 - Flammable liquid and vapour.

**Warning**H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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#)

Identification number(s):

EINECS Number:

2,4,6-Trimethylpyridine (CAS# 108-75-8); 100%
203-613-3**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.

After eye contact

Instantly wash with water and soap and rinse thoroughly.

After swallowing

Seek immediate medical advice.

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

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
Nitrogen oxides (NOx)

Possibly Hydrogen cyanide (HCN)

Wear self-contained breathing apparatus.

Wear full protective suit.

Protective equipment:

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.

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.

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Information about storage in one common storage facility:
Further information about storage conditions:

Store away from oxidizing agents.
This product is hygroscopic.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
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:
Eye protection:

Use breathing protection with high concentrations.
Safety glasses
Full face protection
Face protection
Protective work clothing.

Body protection:

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

Form: Liquid
Colour: Colourless
Smell: Unpleasant

Change in condition

Melting point/Melting range: -43°C
Boiling point/Boiling range: 171-172°C
Sublimation temperature / start: Not determined

Flash point:

54°C

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Critical values for explosion:

Lower: Not determined
Upper: Not determined

Steam pressure at 20°C:

4 hPa

Density at 20°C0.916 g/cm³**Solubility in / Miscibility with**

Water at 20°C: 35 g/l
Alcohols: Soluble

pH-value (35 g/l) at 20°C:

9-10

Viscosity:

dynamic at 25°C: 1 mPas

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

Materials to be avoided:

Oxidizing agents
Acids

Dangerous reactions:

No dangerous reactions known

Dangerous products of decomposition:

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

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

Oral	LD50	400 mg/kg (rat)
Dermal	LD50	1 gm/kg (guinea pig)
Inhalative	LCLo/2H	2500 ppm/2H (rat)

Primary irritant effect:

on the skin:

Irritant for skin and mucous membranes.

on the eye:

Irritant effect.

Sensitization:

No sensitizing effect known.

Other information (about experimental toxicology):

Additional toxicological information:

Bacterial mutagenicity test: Ames Salamonella Typhimurium: Negative
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:

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.

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13 Disposal considerations

Product:	
Recommendation	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.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.
Recommended cleaning agent:	Water, if necessary with cleaning agent.

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

ADR/RID-GGVS/E Class:	3 (FT1) Flammable liquids.
Kemler Number:	36
UN-Number:	1992
Packaging group:	III
Label	3+6.1
Designation of goods:	1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (2,4,6-Collidine)
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. (2,4,6-Collidine)

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. (2,4,6-Collidine)

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:**

Xn Harmful

Risk phrases:

10 Flammable.
21/22 Harmful in contact with skin and if swallowed.
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.

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