

Safety Data Sheet

according to 1907/2006/EC, Article 31

Revision: 20.08.2010

Printing date 20.08.2010

1 Identification of substance

Product details

Trade name

2-Methyl-1-buten-3-yne

Stock number:

L06111

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
F+ Extremely flammable

Information pertaining to particular dangers for man and environment

R 12 Extremely flammable.
R 20/22 Harmful by inhalation and if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 65 Harmful: may cause lung damage if swallowed.

GHS label elements

**Danger**

H224 - Extremely flammable liquid and vapour.

**Danger**

H304 - May be fatal if swallowed and enters airways.

**Warning**H302 - Harmful if swallowed.
H332 - Harmful if inhaled.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves/clothing.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315 Get immediate medical advice/attention.
P403+P235 Store in a well-ventilated place. Keep cool.

Prevention:

Response:

Storage:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

2-Methyl-1-buten-3-yne (CAS# 78-80-8)

Identification number(s):

EINECS Number:

201-144-9

4 First aid measures

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:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
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).

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:

Keep containers tightly sealed.
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

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

Refrigerate

Store away from oxidizing agents.
 Do not store together with acids.
 Protect from heat.

Further information about storage conditions:

Keep container tightly sealed.
 Protect from heat and direct sunlight.
 Refrigerate

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:

Not required.
 No data

Additional information:

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:

Use breathing protection with high concentrations.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Material of gloves

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.

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

Face protection

Body protection:

Protective work clothing.

9 Physical and chemical properties:

General Information

Form: Liquid
Colour: Colourless
Smell: Pungent

Change in condition

Melting point/Melting range: -113°C
Boiling point/Boiling range: 32-33°C
Sublimation temperature / start: Not determined

Flash point: -45°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 0.694 g/cm³

Solubility in / Miscibility with Water: Not miscible or difficult to mix

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

Heat

Acids

Heavy metal powders

Dangerous reactions:

Silver may react with acetylene or ammonia to form shock sensitive compounds.

Dangerous products of decomposition:

Carbon monoxide and carbon dioxide

11 Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification:

Oral LD50 350 mg/kg (mouse) (RTECS)
 Inhalative LC50 12600 mg/m³ (mouse) (RTECS)

Primary irritant effect:

Irritant for skin and mucous membranes.

on the skin:

Irritant effect.

on the eye:

No sensitizing effect known.

Sensitization:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Additional toxicological information:

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	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 (F1) Flammable liquids.
Kemler Number:	33
UN-Number:	3295
Packaging group:	I
Label	3
Designation of goods:	3295 HYDROCARBONS, LIQUID, N.O.S.
Limited quantities (LQ)	LQ3
Transport category	1
Tunnel restriction code	D/E

Maritime transport IMDG/GGVSea:



IMDG/GGVSea Class:	3
UN Number:	3295
Label	3
Packaging group:	I
EMS Number:	F-E, S-D
Marine pollutant:	No
Correct technical name:	HYDROCARBONS, LIQUID, N.O.S.

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class:	3
UN/ID Number:	3295
Label	3
Packaging group:	I
Correct technical name:	HYDROCARBONS, LIQUID, N.O.S.

UN "Model Regulation": UN3295, HYDROCARBONS, LIQUID, N.O.S., 3, I

15 Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:

Xn Harmful
F+ Extremely flammable

Risk phrases:

12 Extremely flammable.
20/22 Harmful by inhalation and if swallowed.
36/37/38 Irritating to eyes, respiratory system and skin.
65 Harmful: may cause lung damage if swallowed.

Safety phrases:

3 Keep in a cool place.
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
33 Take precautionary measures against static discharges.
36/37 Wear suitable protective clothing and gloves.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent