

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 17.10.2017

Version 8.0

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No. 803603

Product name 1,5-Diazabicyclo[4.3.0]non-5-ene for synthesis

REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. 3001-72-7

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses Chemical for synthesis  
For additional information on uses please refer to the Merck Chemicals portal ([www.merckgroup.com](http://www.merckgroup.com)).

**1.3 Details of the supplier of the safety data sheet**

Company Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0

Responsible Department LS-QHC \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)

**1.4 Emergency telephone number** Please contact the regional company representation in your country.

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## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Skin corrosion, Category 1B, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

*Hazard pictograms*



*Signal word*

Danger

*Hazard statements*

H314 Causes severe skin burns and eye damage.

*Precautionary statements*

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

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.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

*CAS-No.* 3001-72-7

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## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula C<sub>7</sub>H<sub>12</sub>N<sub>2</sub> (Hill)  
EC-No. 221-087-3  
Molar mass 124,18 g/mol

### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

CAS-No. Registration number Classification

1,5-diazobicyclo[4.3.0]non-5-ene (<= 100 % )

3001-72-7 \*)

Skin corrosion, Category 1B, H314

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

*General advice*

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

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In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

## 4.2 Most important symptoms and effects, both acute and delayed

Risk of blindness!

Irritation and corrosion, Cough, Shortness of breath

## 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Foam, Carbon dioxide (CO<sub>2</sub>), Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Combustible.

Forms explosive mixtures with air on intense heating.

Vapours are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides

### 5.3 Advice for firefighters

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### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

### **6.4 Reference to other sections**

Indications about waste treatment see section 13.

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## **SECTION 7. Handling and storage**

### **7.1 Precautions for safe handling**

#### *Advice on safe handling*

Observe label precautions.

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## *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

## **7.2 Conditions for safe storage, including any incompatibilities**

### *Storage conditions*

Keep under nitrogen.

Tightly closed.

Recommended storage temperature see product label.

## **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## **SECTION 8. Exposure controls/personal protection**

### **8.1 Control parameters**

### **8.2 Exposure controls**

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

#### *Eye/face protection*

Tightly fitting safety goggles

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## *Hand protection*

full contact:

Glove material: butyl-rubber  
Glove thickness: 0,7 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0,40 mm  
Break through time: > 30 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 898 Butoject® (full contact), KCL 730 Camatril® -Velours (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

## *Other protective equipment*

protective clothing

## *Respiratory protection*

required when vapours/aerosols are generated.

Recommended Filter type: filter ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## **Environmental exposure controls**

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Form	liquid
Colour	colourless
Odour	No strong odour known.
Odour Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point/boiling range	110 °C at 20 hPa
Flash point	94 °C
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	No information available.
Relative vapour density	No information available.



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Density 1,04 g/cm<sup>3</sup>  
at 20 °C

Relative density No information available.

Water solubility at 20 °C  
soluble

Partition coefficient: n-octanol/water log Pow: 1,71  
(calculated)  
Bioaccumulation is not expected. (Lit.)

Auto-ignition temperature No information available.

Decomposition temperature No information available.

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties none

## 9.2 Other data

none

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### 10.2 Chemical stability

sensitive to moisture

Sensitive to air.

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## 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents, Acid anhydrides, acid halides, acids

## 10.4 Conditions to avoid

Exposure to moisture

Exposure to air.

Strong heating.

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

#### *Acute inhalation toxicity*

Symptoms: Shortness of breath, Cough, mucosal irritations, Possible damages:., damage of respiratory tract

#### *Acute dermal toxicity*

This information is not available.

#### *Skin irritation*

Causes burns.

#### *Eye irritation*

Causes serious eye damage.

Risk of blindness!

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## *Sensitisation*

This information is not available.

## *Germ cell mutagenicity*

This information is not available.

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## 11.2 Further information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

No information available.

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

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*Partition coefficient: n-octanol/water*

log Pow: 1,71  
(calculated)

Bioaccumulation is not expected. (Lit.)

## 12.4 Mobility in soil

No information available.

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

## 12.6 Other adverse effects

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

*Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 3267
14.2 Proper shipping name	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,5-DIAZABICYCLO(4.3.0)NON-5-ENE)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN)

Not relevant

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## Air transport (IATA)

14.1 UN number UN 3267  
14.2 Proper shipping name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,5-DIAZABICYCLO(4.3.0)NON-5-ENE)  
14.3 Class 8  
14.4 Packing group II  
14.5 Environmentally hazardous --  
14.6 Special precautions for user no

## Sea transport (IMDG)

14.1 UN number UN 3267  
14.2 Proper shipping name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (1,5-DIAZABICYCLO(4.3.0)NON-5-ENE)  
14.3 Class 8  
14.4 Packing group II  
14.5 Environmentally hazardous --  
14.6 Special precautions for user yes  
EmS F-A S-B

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not relevant

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## SECTION 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation Not applicable  
Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

### *National legislation*

Storage class 8A

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H314 Causes severe skin burns and eye damage.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Hazard pictograms*



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## *Signal word*

Danger

## *Hazard statements*

H314 Causes severe skin burns and eye damage.

## *Precautionary statements*

### Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response

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.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

## **Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## **Regional representation**

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*