

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 01.07.2013

Revision: 13.11.2008

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

Trade name

1,3-Cyclohexanedione

Stock number:

A111109, L01261

CAS Number:

504-02-9

EC number:

207-980-0

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

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com

Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.

Information concerning particular hazards for human and environment:

Other hazards that do not result in classification

Not applicable

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

Precautionary statements

The substance is classified and labelled according to the CLP regulation.

GHS07

Warning

H302 Harmful if swallowed.

P264

Wash thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P301+P312

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330

Rinse mouth.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation:

504-02-9 1,3-Cyclohexanedione

Identification number(s):

207-980-0

EC number:

SECTION 4: First aid measures**4.1 Description of first aid measures**

After inhalation

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

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

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

Seek medical treatment.

After skin contact

After eye contact

After swallowing

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing agents

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

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

Do not allow product to reach sewage system or water bodies.

Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Dispose of contaminated material as waste according to item 13.

Prevention of secondary hazards:

No special measures required.

6.4 Reference to other sections

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

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See Section 13 for information on disposal.

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SECTION 7: Handling and storage**7.1 Precautions 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:

No information known.

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
No further relevant information available.

7.3 Specific end use(s)**SECTION 8: Exposure controls/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.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

Not required.

Additional information:

No data

8.2 Exposure controls

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.
Maintain an ergonomically appropriate working environment.
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.

Breathing equipment:

Protection of hands:

Impervious gloves
Not determined
Safety glasses
Protective work clothing.

Material of gloves

Penetration time of glove material

Eye protection:

Body protection:

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

General Information

Appearance:

Form:

Powder

Colour:

Light brown

Smell:

Not determined

Odour threshold:

Not determined.

pH-value:

Not applicable.

Change in condition

Melting point/Melting range:

101-105 °C

Boiling point/Boiling range:

Not determined

Sublimation temperature / start:

Not determined

Flash point:

Not applicable

Inflammability (solid, gaseous)

Not determined.

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Self-inflammability:

Not determined.

Danger of explosion:

Product is not explosive.

Critical values for explosion:

Lower:

Not determined

Upper:

Not determined

Steam pressure:

Not applicable.

Density at 20 °C

1,1 g/cm³

Relative density

Not determined.

Vapour density

Not applicable.

Evaporation rate

Not applicable.

Solubility in / Miscibility with

155 g/l

Water at 20 °C:

Not determined.

Partition coefficient (n-octanol/water):

Not determined.

Viscosity:

Not applicable.

dynamic:

Not applicable.

kinematic:

Not applicable.

9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No information known.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.5 Incompatible materials:

Oxidizing agents

10.6 Hazardous decomposition products:

Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity:

Harmful if swallowed.

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LD/LC50 values that are relevant for classification:	No data
Skin irritation or corrosion:	May cause irritation
Eye irritation or corrosion:	May cause irritation
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	No effects known.
Carcinogenicity:	No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity:	No effects known.
Specific target organ system toxicity - repeated exposure:	No effects known.
Specific target organ system toxicity - single exposure:	No effects known.
Aspiration hazard:	No effects known.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity	No further relevant information available.
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Additional ecological information:	
General notes:	Do not allow material to be released to the environment without proper governmental permits. 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. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Hand over to disposers of hazardous waste.
Recommendation	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.

SECTION 14: Transport information

UN-Number	None
ADR, IMDG, IATA	
14.2 UN proper shipping name	None
ADR, IMDG, IATA	
14.3 Transport hazard class(es)	
ADR, IMDG, IATA	
Class	None
Packing group	
ADR, IMDG, IATA	None
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
Australian Inventory of Chemical Substances	Substance is listed.
Standard for the Uniform Scheduling of Drugs and Poisons	Substance is not listed.
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.
Other regulations, limitations and prohibitive regulations	
ELINCS (European List of Notified Chemical Substances)	Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57	Substance is not listed.
REACH - Pre-registered substances	Substance is listed.
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

SECTION 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.
Abbreviations and acronyms:	RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) 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) ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association 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