

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 08-May-2019

Print date: 14-May-2019

Version: 4

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1,2,3,4,5,6-cyclohexanehexacarboxylic acid

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name/designation:

1,2,3,4,5,6-cyclohexanehexacarboxylic acid

CAS No.:

2216-84-4

EC No.:

218-699-8

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

Use of the substance/mixture:

Intermediate for the chemical industry

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Valsynthese S. A.

Société Suisse des Explosifs Group

Fabrikstrasse 48

3900 Brig

Switzerland

Telephone: +41 27 922 71 11

Telefax: +41 27 922 72 00

E-mail: info@valsynthese.ch

Website: www.valsynthese.ch

E-mail (competent person): msds@explosif.ch

1.4. Emergency telephone number

United States of America: Poison control center - national hotline number 1-800-222-1222 Great Britain: National phone number 111 Republic of Ireland: National phone number 01 809 2166 Czech Republic: Toxikologické informační středisko +420 224 919 293, +420 224 915 402 Denmark: Giftlinjen +45 82 12 12 12 France: numéro ORFILA (INRS) : +33 (0)1 45 42 59 59 Italy: 06-3054343 (24h/24h), Centro antiveneni Policlinico Umberto I, Roma Spain: National Emergency Telephone Number: +34 91 562 04 20. The information will be provided in Spanish (24h/365 days). Sweden: +46 112 in case of emergency poisoning and ask for Poison Information both day and night. +46 08-331231 if you have other questions concerning acute poisonings mon-fri 9.00-17.00., +41 27 922 71 11 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Skin corrosion/irritation (<i>Skin Irrit. 2</i>)	H315: Causes skin irritation.	
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	
STOT-single exposure (<i>STOT SE 3</i>)	H335: May cause respiratory irritation.	

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

hazard statements for health hazards

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Supplemental Hazard information (EU): -

Precautionary statements Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
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Precautionary statements Response

P302 + P352	IF ON SKIN: Wash with plenty of water/Seife.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.


2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.1. Substances

Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 2216-84-4 EC No.: 218-699-8	1,2,3,4,5,6-cyclohexanehexacarboxylic acid Eye Irrit. 2, STOT SE 3, Skin Irrit. 2  Warning H315-H319-H335	≤ 100 Wt %

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious place in recovery position and seek medical advice. Do not leave affected person unattended. Warning First aider: Pay attention to self-protection!

Following inhalation:

Provide fresh air. In case of respiratory tract irritation, consult a physician. Get medical advice/attention if you feel unwell.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention. Take off immediately all contaminated clothing.

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After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion:

Rinse mouth. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Get immediate medical advice/attention.

Self-protection of the first aider:

Use personal protection equipment.

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

Skin corrosion/irritation Serious eye damage/eye irritation Irritation to respiratory tract

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings. Carbon dioxide (CO₂), alcohol resistant foam, Dry extinguishing powder, Water spray jet

Unsuitable extinguishing media:

Strong water jet

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

In case of fire: Gases/vapours, toxic, Carbon monoxide, Carbon dioxide (CO₂)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety.

Protective equipment:

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

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Take up mechanically, placing in appropriate containers for disposal. Dispose of the residus of the product as hazardous waste (see section 13).

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

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6.5. Additional information

Losses during use of the product must be collected and disposed of in special containers as special waste.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8). Do not breathe dust.

Measures to prevent aerosol and dust generation:

Dust should be exhausted directly at the point of origin.

Advices on general occupational hygiene

When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Hints on storage assembly:

Do not store together with acids or basic substances. Keep away from oxidising agents.

Storage class: 11 - Combustible solids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

8.2.2. Personal protection equipment



Eye/face protection:

Eye glasses with side protection DIN EN 166

Skin protection:

Use protective gloves in accordance to EN 374. The following material is suitable: NBR

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Full-/half-/quarter-face masks (DIN EN 136/140) Filter type: Filter P2 or P3 (DIN EN 143)

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: solid

Colour: white

Odour: not determined

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Safety relevant basis data

parameter		at °C	Method	Remark
pH	<i>not determined</i>			
Melting point	≈ 222 °C			
Freezing point	<i>not determined</i>			
Initial boiling point and boiling range	<i>not determined</i>			
Decomposition temperature	<i>not determined</i>			
Flash point	<i>not determined</i>			
Evaporation rate	<i>not determined</i>			
Auto-ignition temperature	<i>not determined</i>			
Upper/lower flammability or explosive limits	<i>not determined</i>			
Vapour pressure	<i>not determined</i>			
Vapour density	<i>not determined</i>			
Density	0.95 kg/l	20 °C		
Bulk density	<i>not determined</i>			
Water solubility	180 g/l	20 °C		
Partition coefficient: n-octanol/water	<i>not determined</i>			
Dynamic viscosity	<i>not determined</i>			
Kinematic viscosity	<i>not determined</i>			

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Acids, alkalines, Oxidizing agent

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye irritation.

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Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

May cause respiratory irritation.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional information:

No data available

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity:

Based on available data, the classification criteria are not met.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

CAS No.	Substance name	Results of PBT and vPvB assessment
2216-84-4	1,2,3,4,5,6-cyclohexanehexacarboxylic acid	The substance in the mixture does not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The product may not be eliminated as municipal solid waste nor allowed to end up in the drainage system. These packs can be delivered packaging-specific to the existing collection points for hazardous waste.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

16 03 05 *	organic wastes containing hazardous substances
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*: Evidence for disposal must be provided.

Remark:

Wastecode according to regulation EU 2014/955:

Waste treatment options

Appropriate disposal / Product:

Dispose of used product in its original packaging as special waste.

Appropriate disposal / Package:

Completely emptied packages can be recycled.

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SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

Land transport (ADR/RID)	
14.1. UN-No.	
No dangerous good in sense of these transport regulations.	
14.2. UN proper shipping name	
No dangerous good in sense of these transport regulations.	
14.3. Transport hazard class(es)	
not relevant	
14.4. Packing group	
not relevant	
14.5. Environmental hazards	
not relevant	
14.6. Special precautions for user	
not relevant	

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

SECTION 15: Regulatory information

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

No data available

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1. Indication of changes

This is the fourth Version based on the classification according to Regulation (EC) No 1272/2008 and (EU) No 830/215. Modifications compared to version 3: SECTION 1: Identification of the substance/ mixture and of the company/undertaking SECTION 2: Hazards identification SECTION 3: Composition / information on ingredients SECTION 4: First aid measures SECTION 5: Firefighting measures SECTION 6: Accidental release measures SECTION 7: Handling and storage SECTION 8: Exposure controls/personal protection SECTION 9: Physical and chemical properties SECTION 10: Stability and reactivity SECTION 11: Toxicological information SECTION 12: Ecological information SECTION 13: Disposal considerations SECTION 14: Transport information SECTION 15: Regulatory information SECTION 16: Other information

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16.2. Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR European agreement concerning the international carriage of dangerous goods by road

CAS Chemical Abstract Service

CLP Classification, labelling and Packaging

EC50 Effective Concentration 50%

EN European norm

IATA International Air Transport Association

IMDG-Code International Maritime Dangerous Goods Code

LC50 Lethal Concentration 50%

LD50 Lethal Dose 50%

OECD Organization for Economic Cooperation and Development

PBT persistent, bioaccumulative, toxic

PNEC Predicted No Effect Concentration

REACH Registration, Evaluation and Authorization of Chemicals

RID Regulations concerning the international carriage of dangerous goods by rail

SVHC Substance of Very High Concern

UN United Nations

VOC Volatile organic compounds

vPvB very persistent, very bioaccumulative

16.3. Key literature references and sources for data

Security safety data sheet of the ingredients. Inventory of substances of the European Chemical Agency (ECHA).

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Classification according to Regulation (EC) No 1272/2008 [CLP]:

Hazard classes and hazard categories	Hazard statements	Classification procedure
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Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	
STOT-single exposure (<i>STOT SE 3</i>)	H335: May cause respiratory irritation.	

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

16.6. Training advice

Persons charged with the handling and cleaning of the product must be trained prior to start their work and in regular intervals. They must be informed about the risks using the product and the measures to take for efficient prevention. This concerns particularly working security, first aid, health and environment protection.

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new madeup material.