VALSYNTHESE

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

HEXAHYDRO-4,8-ETHANO-1H,3H-BENZO(1,2-C:4,5-C')DIFURAN-1,3,5,7-TETRONE

Revision date	07.04.2025
Version	3
Replaces version from	15.02.2021

1. Identification of the substance/Mixture and of the company/undertaking

1.1 Product identifier

Product name	Hexahydro-4,8-ethano-1H,3H-benzo(1,2-C:4,5-C')difuran-1,3,5,7-tetrone
CAS-No.	2754-40-7
EC-No.	220-406-3

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

Identified uses	Additive or intermediate for the chemical industry.

1.3 Details of the supplier of the safety data sheet

Name	Valsynthese SA
Factory address	Valsynthese SA Fabrikstrasse 48 PO Box 636 3900 Brig / Switzerland
Office address	Valsynthese SA Societe Suisse des Explosifs Group PO Box 636 3900 Brig / Switzerland
Information Department	This number is available only during office hours. Phone +41 27 922 71 11 E-Mail (Responsible person): msds@explosif.ch
1.4 Emergency Phone Number	+41 27 922 71 11 (only during office hours) or Toxicological Information Centre in Switzerland: Tel. 145 or +41 (0) 44 251 51 51

2. Hazards Identification

2.1 Classification of the substance or mixture

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

Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 2), H319
Specific target organ toxicity– single exposure (Category 3), H335

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Hazard pictogram(s)

Signal word	Warning
Hazard statement(s)	
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Precautionary statement(s)	
P280	Wear protective gloves/protective clothing/eye protection/ face protection.
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.
Supplemental Hazard Statements	none

2.3 Other hazards

none

3. Composition / Information on ingredients

3.1 Substance

Product name	Hexahydro-4,8-ethano-1H,3H-benzo(1,2-C:4,5-C')difuran-1,3,5,7-tetrone
Molecular formula	$C_{12}H_{10}O_6$
Molecular weight	250.20 g/mol

Cas-No.	2754-40-7
EC-No.	220-406-3

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Hexahydro-4,8-ethano-1H,3H-benzo(1,2-C:4,5-C')difuran-1,3,5,7-tetrone		
CAS-No. 2754-40-7 EC-No. 220-406-3	Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H315; H319; H335	<=100%

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

4. First-aid measures

4.1 Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Water, Foam, Carbon dioxide (CO2), Dry powder.

5.2 Special hazards arising from the substance or mixture

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

5.3 Advice for fire fighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Additional information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For further and detailed information see section 8 and 13.

7. Handling and storage

7.1 Precautions for safe handling

Protective measures

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

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

7.3 Specific end use(s)

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

8. Exposure controls / Personal protection

8.1 Control parameters

Ingredients with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

Eye/face protection	Eye Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.
Skin protection	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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0.11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L
Body Protection	protective clothing.
Respiratory protection	required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P2. The entrepeneur 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Color	white
Odor	Acetic acid

pH value	No data available
Melting point/freezing point	373° C
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Density	No data available
Relative density	No data available
Solubility(ies)	0.4 g/l at 20° C
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other information

No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Curing of epoxides.

10.4 Conditions to avoid

Humidity (hydrolysis).

10.5 Incompatible materials

Acids, alkalines, Oxidizing agent.

10.6 Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
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.

11.2 Additional information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

12.1 Toxicity

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

12.2 Persistence and degradability

No data available

12.3 Bioaccumulation potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

13. Disposal considerations

13.1 Waste treatment methods

Product

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.

Contaminated packaging

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

14. Transport information

14.1 UN Number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packing group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6 Special precautions for user

No data available

Further information

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

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

16. Other information

16.1 Information regarding the revision of the safety data sheet

This material safety data sheet has been revised completely and is considered new without any previous version.

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

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

16.3 Additional information

The information contained herein is in conformity with EU Directive EC 1907/2006 and EC 1272/2008, and is believed to be accurate and represents the best information currently available to us on the date of publication. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Valsynthese SA be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Valsynthese SA has been advised of the possibility of such damages.