Reviewed on 04/06/2022



GENOMIC ANALYSIS BY LGC

1 Identification

· Product identifier

· Product name: 3-(3-Hydroxypropyl)solketal

· Part number: LKD4170

• Information department: Product safety department

- · CAS Number:
- 206999-64-6
- · Application of the substance / the mixture Reference material for laboratory use only

Safety Data Sheet acc. to OSHA HCS

· Details of the supplier of the safety data sheet

For Hazardous Materials or Dangerous Goods Incident

1-800-424-9300 +*1 703-741-5970*

• Manufacturer/Supplier: Berry & Associates/ICON Isotopes 2434 Bishop Circle East Dexter, MI 48130 USA

eMail : sds-request@lgcgroup.com • Emergency telephone number:

Spill, Leak, Fire Exposure, or Accident

Tel: +1 734-426-3787 Fax: +1 734-426-9077 Email: orders@berryassoc.com

2 Hazard(s) identification

· Classification of the substance or mixture



Call CHEMTREC: USA & Canada

Rest of the world

Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation.

· Label elements

· GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS). • *Hazard pictograms*



· Signal word Warning · Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. · Precautionary statements P264 Wash thoroughly after handling. P280 Wear protective gloves / eye protection / face protection. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 Specific treatment (see on this label). P332+P313 If skin irritation occurs: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention.

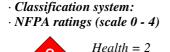
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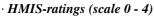
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 $\begin{array}{c} 0 \\ 0 \\ 0 \\ \end{array}$ $\begin{array}{c} Fire = 0 \\ Reactivity = 0 \end{array}$





· Other hazards

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 206999-64-6 3-(3-Hydroxypropyl)solketal
- · Identification number(s) -
- · RTECS: -

4 First-aid measures

· Description of first aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:
- Immediately wash with water and soap and rinse thoroughly.
- If skin irritation continues, consult a doctor.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: Rinse mouth. Do not induce vomiting.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*
- 5 Fire-fighting measures
- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture
- Formation of toxic gases is possible during heating or in case of fire.
- · Advice for firefighters
- · Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Wear protective clothing.

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- · Environmental precautions: Do not allow to enter sewers/ surface or ground water. • Methods and material for containment and cleaning up:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

- · PAC-1: Substance is not listed.
- · PAC-2: Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

· Handling:

- · Precautions for safe handling Store in cool, dry place in tightly closed receptacles.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles:

Please refer to the manufacturers certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

- Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- · Information about storage in one common storage facility: Store away from foodstuffs. · Further information about storage conditions: Keep receptacle tightly sealed.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

- · Breathing equipment:
- Not required.

Use suitable respiratory protective device in case of insufficient ventilation.

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374

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Protective gloves

- · Material of gloves Nitrile rubber, NBR
- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:

Tightly sealed goggles

Information on basic physical and	chemical properties	
General Information		
Appearance:		
Form:	Liquid	
Color:	Light yellow	
· Odor:	Odorless	
Odor threshold:	Not determined.	
pH-value:	Not determined.	
Change in condition		
Melting point/Melting range:	Not determined.	
	Not determined.	
Boiling point/Boiling range:	Not determined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Not determined.	
Ignition temperature:	Not determined	
Decomposition temperature:	Not determined.	
Auto igniting:	Not determined.	
Danger of explosion:	Not determined.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapor pressure:	Not determined.	
Density:	Not determined.	
Relative density	Not determined.	
· Vapor density	Not determined.	
Evaporation rate	Not determined.	
Solubility in / Miscibility with		
Water:	Not determined.	
· Partition coefficient (n-octanol/wat	er). Not determined	

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 Viscosity: Dynamic: Kinematic:

Not determined. Not determined.

· Other information

No further relevant information available.

10 Stability and reactivity

· Reactivity

Stable under normal conditions.

No further relevant information available.

• Chemical stability Stable under normal conditions.

- Thermal decomposition / conditions to be avoided: Formation of toxic gases is possible during heating or in case of fire.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid Heat.
- · Incompatible materials: Strong oxidizing agents.
- · Hazardous decomposition products: Formation of toxic gases is possible during heating or in case of fire.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- on the eye:
- Irritating effect.

Causes serious eye irritation.

- Sensitization: Based on available data, the classification criteria are not met.
- · Additional toxicological information:

· Carcinogenic categories

- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · 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 course or sewage system.
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

• *Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*

- · Uncleaned packagings:
- · Recommendation: Dispose in accordance with national regulations.

UN-Number		
DOT, ADR, IMDG, IATA	Not applicable	
DOT, ADR, IMDG, IATA	Not applicable	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA		
Class	Not applicable	
Packing group		
DOT, ADR, IMDG, IATA	Not applicable	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
· UN ''Model Regulation'':	Not applicable	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

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Product name: 3-(3-Hydroxypropyl)solketal

· Hazard pictogra	(Contd. of page 6)	
$\langle 1 \rangle$		
GHS07		
· Signal word War	ning	
· Hazard statemen		
H315 Causes ski	n irritation.	
H319 Causes ser	ious eye irritation.	
· Precautionary st	atements	
P264	Wash thoroughly after handling.	
P280	Wear protective gloves / eye protection / face protection.	
P305+P351+P3	38 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P321	Specific treatment (see on this label).	
P332+P313	If skin irritation occurs: Get medical advice/attention.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
· Chemical safety	assessment: A Chemical Safety Assessment has not been carried out.	

16 Other information

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, we cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. We warrant that the chemical meets the specifications set forth on the label. We (LGC/VHG/ARMI) disclaim any other warranties, expressed or implied with regard to the product supplied hereunder, its merchantability or its fitness for a particular purpose. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. Read all precautionary information.

· Contact:

· Date of preparation / last revision 04/06/2022 / -

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Irrit. 2A: Serious eye damage/eye irritation - Category 2A

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· Sources

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

• **Data compared to the previous version altered.** All sections have been updated.