



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
OSHA HCS2012

Revision date 09-Apr-2024

Revision Number 1

1. Identification

Product identifier

Product Name rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)

Other means of identification

Product Code(s) TRC-H952972-10MG

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use This product is for research and development only

Restrictions on use Not to be used for human or animal consumption

Details of the supplier of the safety data sheet

Supplier Address

VHG
LGC Standards
276 Abby Road
Manchester, NH 03103
UNITED STATES OF AMERICA

Tel : +1 (603) 622-7660
Fax : +1 (603) 622-5180
Email : lgcusa@lgcgroup.com

Web : lgcstandards.com

E-mail sds-request@lgcgroup.com

Emergency telephone number

Emergency Telephone

For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

2. Hazard(s) identification



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Classification

Classified according to OSHA.

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning

Hazard statements

Classified according to OSHA.
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Very toxic to aquatic life with long lasting effects



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing



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If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
Rinse mouth

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life.

3. Composition/information on ingredients

Substance

Formula C₂₁H₃₁D₃N₂O₃

Chemical name	CAS No.	Weight-%	Trade secret
rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)	-	100	*

Additional information

This product contains a stable isotope

4. First-aid measures

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.



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Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).
<u>Most important symptoms and effects, both acute and delayed</u>	
Symptoms	May cause redness and tearing of the eyes. Burning sensation.
<u>Indication of any immediate medical attention and special treatment needed</u>	
Note to physicians	Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.
Other information	Refer to protective measures listed in Sections 7 and 8.



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Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

8. Exposure controls/personal protection

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations



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Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	If splashes are likely to occur, wear safety glasses with side-shields. Avoid contact with eyes. Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves. Impervious gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.
Skin and body protection	Long sleeved clothing. Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Environmental exposure controls	Do not allow into any sewer, on the ground or into any body of water.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid
Appearance	Solid
Color	white; to; off-white
Odor	No information available
Odor threshold	No information available

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known



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Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	365.52
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.
Incompatible materials	Strong acids. Strong bases. Strong oxidizing agents.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based



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on components).

Ingestion

Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Redness. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Classification based on data available for ingredients. Causes skin irritation. May cause skin irritation.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.



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Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.

13. Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

DOT

UN number or ID number	UN3077
Extended proper shipping name	Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major))
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 335, 384, 441, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33
DOT Marine Pollutant	I
Marine pollutant	rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (rac



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**Emergency Response Guide
Number**

4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)), 9, III, Marine
pollutant
171

TDG

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major))
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Marine pollutant	P
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)), 9, III

MEX

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major))
Transport hazard class(es)	9
Packing group	III
Technical Name	rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)), 9, III
Special Provisions	274, 331, 335

IATA

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major))
Transport hazard class(es)	9
Packing group	III
Technical Name	rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)), 9, III
Special Provisions	A97, A158, A179, A197, A215
ERG Code	9L

IMDG

UN number or ID number	Not regulated
UN proper shipping name	UN3077 Environmentally hazardous substance, solid, n.o.s. (rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major))
Transport hazard class(es)	9
Packing group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 966, 967, 969



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Marine pollutant
Marine Pollutant
Description

P
rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)
UN3077, Environmentally hazardous substance, solid, n.o.s. (rac
4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)), 9, III, Marine
pollutant

15. Regulatory information

International Inventories

TSCA

LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
rac 4-Hydroxy-4-(3-pyridyl)butanoic-d3 Acid Dicyclohexylamine Salt (d3 Major)	-	-	Unknown *

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

DSL/NDL
EINECS/ELINCS
ENCS
IECSC
KECL
PICCS
AIIC

Contact supplier for inventory compliance status.
Contact supplier for inventory compliance status.
Contact supplier for inventory compliance status.
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Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances



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AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA	Health hazards 2	Flammability 0	Instability 0	Special hazards -
HMIS	Health hazards 2	Flammability 0	Physical hazards 0	Personal protection X

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



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Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 09-Apr-2024

Revision Note No information available.

Disclaimer

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.

End of Safety Data Sheet