

Safety Data Sheet

according to UK REACH Regulation

1-alpha-hydroxy vitamin D2-d6

Revision: 04.11.2025

Product code: LS-3770

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

1.1. Product identifier

1-alpha-hydroxy vitamin D2-d6

Further trade names

Doxercalciferol-d6,

(1R,3S,Z)-5-((E)-2-((7aR)-1-((2R,5S,E)-7,7,7-trideutero-6-

(trideuteromethyl)-5-methylhept-3-en-2-yl)-7a-methyldihydro-1H-inden-4(2H,5H,6H,7H,7aH)-ylidene)ethylidene)

-4-methylenecyclohexane-1,3-diol

Substance name: 1-alpha-hydroxy vitamin D2-d6

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

Use of the substance/mixture

Laboratory chemical. Manufacture of the substance.

Uses advised against

Do not use for private purposes (household).

Restrictions on use: Pharmaceutical substance

1.3. Details of the supplier of the safety data sheet

Company name:	Iris Biotech GmbH	
Street:	Adalbert-Zoellner-Straße 1	
Place:	D-95615 Markredwitz, Germany	
Telephone:	+49 9231 97121 0	Telefax: +49 9231 97121 99
E-mail:	info@iris-biotech.de	
Contact person:	Health & Safety Department	Telephone: +49 9231 97121 0
E-mail:	sds@iris-biotech.de	
Internet:	www.iris-biotech.de	
Responsible Department:	Only available during office hours.	

1.4. Emergency telephone number:

+49 (0)89 19240 (POISON CENTER Munich: 24 h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Acute Tox. 1; H300

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Danger

Pictograms:



Hazard statements

H300 Fatal if swallowed.

Precautionary statements

P264 Wash Skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

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P330 Rinse mouth.
 P405 Store locked up.
 P501 Dispose of contents/container to hazardous or special waste collection point.

Additional advice on labelling

Warning - substance not yet tested completely.

2.3. Other hazards

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.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients
3.1. Substances
Chemical characterization

Doxercalciferol-d6

 Sum formula: C₂₈H₃₈D₆O₂

Molecular weight: 418,68 g/mol g/mol

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
	1-alpha-hydroxy vitamin D2-d6			100 %
	Acute Tox. 1; H300			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
		1-alpha-hydroxy vitamin D2-d6	100 %
	oral: LD50 = 3,5 mg/kg		

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).

In all cases of doubt, or when symptoms persist, seek medical advice.

After inhalation

Provide fresh air. Medical treatment necessary. Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary. Remove contaminated, saturated clothing immediately. Rinse skin with water or shower. If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

After eye contact: Rinse immediately carefully and thoroughly with eye-bath or water. Consult an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses. If eye irritation persists: Get medical advice/attention.

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After ingestion

Never give anything by mouth to an unconscious person or a person with cramps. Induce vomiting when the affected person is not unconscious. Call a physician immediately. Give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

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.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings. Water, Foam, Carbon dioxide (CO₂), Extinguishing powder

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Carbon oxides

Combustible

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

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water. Do not allow run-off from fire-fighting to enter drains or water courses.

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

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Absolutely avoid dust development and inhalation of dust. Avoid substance contact. Provide adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For non-emergency personnel

Absolutely avoid dust development and inhalation of dust. Avoid substance contact. Provide adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For emergency responders

Absolutely avoid dust development and inhalation of dust. Avoid substance contact. Provide adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil.

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

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For containment

Avoid dust formation.

For cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal. Seal sewers. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7.2 and 10.5). Dispose of properly. Clean up affected area.

Other information

Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation. Clear contaminated areas thoroughly.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13 Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Wear personal protection equipment. Wash hands and face thoroughly after handling.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Store in a well-ventilated place. storage temperature: -20°C

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust. Work

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under a hood.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear eye protection/face protection. For eye protection, only use equipment that has been tested and approved to government standards such as NIOSH (US) or EN 166 (EU).

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Glove material: nitrile rubber, glove thickness: 0.11 mm, Breakthrough time:> 480 min

Skin protection

Use of protective clothing. Protective clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Required when dusts occur.

Recommended Filter type: P3

The entrepreneur 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.

Thermal hazards

No data available

Environmental exposure controls

Do not empty into drains.

Discharge into the environment must be avoided.

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

Physical state:	solid
Colour:	white/ whitish
Odour:	No data available
Odour threshold:	No data available
Melting point/freezing point:	140 °C
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	No data available
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	not determined
Viscosity / kinematic:	not applicable
Water solubility:	No data available
Solubility in other solvents	
No data available	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	No data available
Dispersion stability:	No data available
Vapour pressure:	not determined
Density:	not determined
Relative density:	No data available
Bulk density:	No data available

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Relative vapour density: No data available
 Particle characteristics: No data available

9.2. Other information
Information with regard to physical hazard classes
Explosive properties

The product is not: Explosive. Product is not dust explosive in its original delivery form. The addition of particulate matter, however, results in a dust explosion risk.

Sustained combustibility: No data available

Self-ignition temperature

Solid: No data available
 Gas: not applicable

Oxidizing properties

No data available

Other safety characteristics

Solvent content: No data available

Viscosity / dynamic: not applicable

Flow time: not applicable

SECTION 10: Stability and reactivity
10.1. Reactivity

The following applies to flammable, organic substances and mixtures in general: With appropriately fine distribution, when whirled up, a dust explosion potential can generally be assumed.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Violent reaction with: Oxidising agent, strong

10.4. Conditions to avoid

Protect from moisture.
 Keep away from heat.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrogen oxides (NO_x).

Further information

In case of fire: See chapter 5.

SECTION 11: Toxicological information
11.1. Information on hazard classes as defined in GB CLP Regulation
Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Fatal if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	1-alpha-hydroxy vitamin D2-d6				
	oral	LD50 3,5 mg/kg	Rat		

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Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

STOT-single exposure

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

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.

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Practical experience

No data available

11.2. Information on other hazards**Endocrine disrupting properties**

No data available

Other information

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

Further information

RTECS: No data available

To our knowledge, the chemical, physical and toxicological properties have not been extensively studied. Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information**12.1. Toxicity**

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

No data available

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

This substance does not meet the PBT/vPvB criteria of UK REACH.

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.

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12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Warning - substance not yet tested completely.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number:	UN 2811
14.2. UN proper shipping name:	TOXIC SOLID, ORGANIC, N.O.S. (Doxercalciferol-d6)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1



Classification code:	T2
Special Provisions:	274 614
Limited quantity:	500 g
Excepted quantity:	E4
Transport category:	2
Hazard No:	60
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 2811
14.2. UN proper shipping name:	TOXIC SOLID, ORGANIC, N.O.S. (Doxercalciferol-d6)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1



Classification code:	T2
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Special Provisions: 274 614 802
 Limited quantity: 500 g
 Excepted quantity: E4

Marine transport (IMDG)

14.1. UN number or ID number: UN 2811
14.2. UN proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Doxercalciferol-d6)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
 Hazard label: 6.1



Special Provisions: 274
 Limited quantity: 500 g
 Excepted quantity: E4
 EmS: F-A, S-A

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 2811
14.2. UN proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Doxercalciferol-d6)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
 Hazard label: 6.1



Special Provisions: A3 A5
 Limited quantity Passenger: 1 kg
 Passenger LQ: Y644
 Excepted quantity: E4
 IATA-packing instructions - Passenger: 669
 IATA-max. quantity - Passenger: 25 kg
 IATA-packing instructions - Cargo: 676
 IATA-max. quantity - Cargo: 100 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Acute Toxicity.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

Hazchem code: 2X

SECTION 15: Regulatory information
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
EU regulatory information

Information according to Directive 2012/18/EU (SEVESO III): H1 ACUTE TOXIC

Additional information

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

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National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,4,5,6,7,8,9,10,11,12,13,14,15,16.

Abbreviations and acronyms

Acute Tox. 1: Acute toxicity, hazard category 1
ADR: Accord relatif au transport international des marchandises dangereuses par route (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
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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Relevant H and EUH statements (number and full text)

H300 Fatal if swallowed.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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 made-up material.