

Safety Data Sheet

#12191927 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
D-Leucine	328-38-1	(CH ₃) ₂ CHCH ₂ CH(NH ₂)CO ₂ H	10	26 Aug 2026

SECTION 1

Identification

Product name	D-Leucine
CAS number	328-38-1
Chemical formula	(CH ₃) ₂ CHCH ₂ CH(NH ₂)CO ₂ H
Molecular weight	131.17
SMILES	CC(C)C[C@H](C(=O)O)N
EC / EINECS number	206-327-7
Recommended use & restrictions	For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.
Emergency telephone	0344 892 0111 — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

NONE

CODE	PRECAUTIONARY STATEMENT
P264	Wash thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection
P308+313	IF exposed or concerned: Get medical advice/attention

Other hazards (e.g. PBT / vPvB, not classified)	This product does not contain any known or suspected Endocrine disruptors. Does not contain components considered to be persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).
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SECTION 3

Composition / information on ingredients

Purity / concentration	~100.0%
Impurities / stabilising additives	<i>Not applicable</i>

SECTION 4

First-aid measures

Inhalation	Fresh air.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower.
Eye contact	Rinse out with plenty of water. Remove contact lenses.
Ingestion	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Symptoms / effects & medical attention	The levorotary (l) forms of leucine, isoleucine, and valine have been found to have tumor-promoting activity for bladder carcinomas.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.
Unsuitable extinguishing media	No specific firefighting procedure given
Special hazards	Carbon Monoxide (CO) Carbon Dioxide (CO ₂) Nitrogen oxides (NO _x)
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin and eyes. For personal protection, see section 8.
Environmental precautions	Do not let product enter drains.
Containment & clean-up methods	Cover drains. Collect, bind, and pump off spills. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
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Precautions for safe handling	For precautions see section 2.2.
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Conditions for safe storage (incompatibilities)	Tightly closed. Dry.
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SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)	Contains no substances with occupational exposure limits.
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DNEC/PNEC data	<i>Not applicable</i>
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Eye / face protection	Safety glasses Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
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Skin / hand protection	Nitrile gloves Thickness: 0.11mm. Breakthrough time: 480mins.
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Respiratory protection	Not required Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.
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SECTION 9

Physical & chemical properties

Density (g/mL)	1 g/mL DERIVED FROM: LITERATURE
Flash point	<i>Not applicable</i>
Acidity	Neutral DERIVED FROM: LITERATURE
Appearance / physical state	Solid DERIVED FROM: LITERATURE
Colour	White DERIVED FROM: LITERATURE
Odour	Odourless DERIVED FROM: LITERATURE
Melting / freezing point	> 300 °C DERIVED FROM: LITERATURE
Boiling point	<i>No data available</i>
Solubility (water)	24 g/l DERIVED FROM: LITERATURE
pH	<i>No data available</i>
Vapour pressure	<i>No data available</i>
Partition coefficient (log Pow)	<i>No data available</i>
Auto-ignition / decomposition temp	<i>No data available</i>

SECTION 10

Stability & reactivity

Chemical stability / reactivity	The product is chemically stable under standard ambient conditions (room temperature).
Conditions to avoid	Incompatible products
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	LD50 Oral - Rat - male and female - > 2,000 mg/kg The value is given in analogy to the following substances: L-leucine
Skin corrosion / irritation	Skin - Rabbit - No skin irritation - 4 h The value is given in analogy to the following substances: L-valine
Eye corrosion / irritation	Eyes - Rabbit - No eye irritation - 1 h The value is given in analogy to the following substances: L-valine
Respiratory / skin sensitisation	Local lymph node assay (LLNA) - Mouse - negative The value is given in analogy to the following substances: L-valine
Carcinogenicity	<i>No data available</i>
Mutagenicity	The value is given in analogy to the following substances: L-valine Ames test- Escherichia coli/Salmonella typhimurium - with and without metabolic activation Result: negative In vitro mammalian cell gene mutation test- mouse lymphoma cells - with and without metabolic activation Result: negative
Reproductive toxicity	<i>No data available</i>
STOT (single / repeated exposure)	<i>No data available</i>
Aspiration hazard	<i>No data available</i>
Endocrine disruptors	Not considered an endocrine disruptor

SECTION 12

Ecological information

Aquatic toxicity	Toxicity to fish: semi-static test LC50 - Danio rerio (zebra fish) - > 10,000 mg/l - 96 h (OECD Test Guideline 203).
Persistence & degradability	Aerobic - Exposure time 28 d, Result: 82 % - Readily biodegradable (OECD Test Guideline 301F).
Bioaccumulative potential	<i>No data available</i>
Mobility in soil	<i>No data available</i>
PBT / vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Dispose of in accordance with local/national regulations
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SECTION 14

Transport information

UN number	Not applicable
Proper shipping name	Not applicable
Class	Not applicable
Packing group	Not applicable
Transport category	Not applicable
Tunnel code	Not applicable
Packing instruction (ADR)	Not applicable
Packing instruction (IMDG)	Not applicable
Environmental hazards	Not applicable
Special precautions for user	Not applicable

SECTION 15

Regulatory information

REACH code	Y113
UFI code	Not applicable
ECHA notification	Not applicable
Chemical safety assessment carried out?	No

SECTION 16

Other information

Revision notes / other information	This is the first version of this SDS
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This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at info@molekula.com.