

L-VALINE (13C5, 99%)

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: Date of issue: 03/01/2020 Version: 1.0

CLM-2249-H-0.1MG

SECTION 1: Identification of the sub	ostance/mixture and of the company/undertaking	
1.1. Product identifier		
Product form	: Substance	
Substance name	: L-VALINE (13C5, 99%)	
EC-No.	: 200-773-6 (Unlabeled)	
CAS-No.	: 72-18-4 (Unlabeled)	
Product code	: CLM-2249-H-0.1MG	
Formula	: (*CH3)2*CH*CH(NH2)*COOH	
Synonyms	: (S)-alpha-Aminoisovaleric acid. L-2-Amino-3-methylbutanoic acid.	
1.2. Relevant identified uses of the sub	stance or mixture and uses advised against	
1.2.1. Relevant identified uses		
Main use category	: Professional use	
Industrial/Professional use spec	: For professional use only	
1.2.2. Uses advised against		
No additional information available		
	dete el cat	
1.3. Details of the supplier of the safety	data sheet	
Cambridge Isotope Laboratories, Inc. 50 Frontage Road		
Andover, MA 01810		
USA		
USA: 1-800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com www.isotope.com		
Emergency telephone number		
Emergency numbers:		
Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)		
SECTION 2: Hazards identification		
2.1. Classification of the substance or r	nixture	
Classification according to Regulation (EC)	No. 1272/2008 [CLP]	
Not classified		
Classification according to Directive 67/548/	EEC [DSD] or 1999/45/EC [DPD]	
Not classified		
GHS-US classification		
Not classified		
Adverse physicochemical, human health and environmental effects		
No additional information available		
2.2. Label elements		

Labeling according to Regulation (EC) No. 1272/2008 [CLP] No labeling applicable

GHS-US labeling

No labeling applicable

2.3. **Other hazards**

No additional information available

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SECTION 3: Composition/Info	rmation on ingredients		
3.1. Substances			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
L-VALINE (13C5, 99%)	(CAS-No.) 72-18-4 (Unlabeled) (EC-No.) 200-773-6 (Unlabeled)	100	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
L-VALINE (13C5, 99%)	(CAS-No.) 72-18-4 (Unlabeled) (EC-No.) 200-773-6 (Unlabeled)	100	Not classified

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
L-VALINE (13C5, 99%) (Main constituent)	(CAS-No.) 72-18-4 (Unlabeled)	100	Not classified

Full text of H-phrases: see section 16

3.2. Mixtures	
Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Move out of dangerous area. Consult a physician and show this safety data sheet.
First-aid measures after inhalation	 If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2. Most important symptoms and effe	cts, both acute and delayed
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: Contact may cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate medica	Il attention and special treatment needed
No additional information available	
SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2. Special hazards arising from the su	bstance or mixture
No additional information available	
5.3. Advice for firefighters	
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release mea	sures
6.1. Personal precautions, protective ed	uipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.
6.1.2. For emergency responders	
No additional information available	
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	
6.3. Methods and material for containme	ent and cleaning up
For containment	: Sweep up and shovel. Keep in suitable, closed containers for disposal.
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6.4. Reference to other sections	
No additional information available	
SECTION 7: Handling and storag	e
7.1. Precautions for safe handling	
Additional hazards when processed	: Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
7.2. Conditions for safe storage, inc	luding any incompatibilities
Technical measures	: Keep container tightly closed in a cool, dry and well-ventilated place.
Storage conditions	: Store at room temperature away from light and moisture.
7.3. Specific end use(s)	
No additional information available	
SECTION 8: Exposure controls/p	ersonal protection
8.1. Control parameters	
No additional information available	
8.2. Exposure controls	
Appropriate engineering controls	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment	: Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.
Materials for protective clothing	: Wear suitable protective clothing and gloves.
Hand protection	: Wear suitable protective clothing and gloves.
Eye protection	: Wear safety glasses with side shields (or goggles) and a face shield.
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	: When appropriate, use NIOSH/CEN approved respirator.
Environmental exposure controls	: Avoid release to the environment.
SECTION 9: Physical and chemic	al properties
9.1. Information on basic physical a	nd chemical properties
Physical state	: Solid

Physical state	: Solid
Appearance	: Solid
Molecular mass	: 122.11 g/mol (Labeled)
Color	: White
Odor	: Odorless
Odor threshold	: No data available
рН	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 295 - 300 °C (563 - 572 °F)
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 5.74g/100g water
Log Pow	: -2.259 at 20 °C (68 °F)
Log Kow	: No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available
9.2. Other information	
No additional information available	
CECTION 40. Stability and reactivity	
SECTION 10: Stability and reactivity	
10.1. Reactivity	
No additional information available	
10.2. Chemical stability	
Stable if stored under recommended conditions.	
10.3. Possibility of hazardous reactions	
No additional information available	
10.4. Conditions to avoid	
No additional information available	
10.5. Incompatible materials	
Strong oxidizing agents.	
10.6. Hazardous decomposition products	
Formed under fire conditions: Carbon oxides Nit	

Formed under fire conditions: Carbon oxides, Nitrogen oxides. **SECTION 11: Toxicological information**

Information on toxicological effects 11.1.

Acute toxicity	: Not classified
L-VALINE (13C5, 99%) (72-18-4 (Unlabeled))	
LD50 oral rat	> 2000 mg/kg Rat female - (OECD Test Guideline 423)
LD50 dermal rat	5390 mg/kg
LC50 inhalation rat (mg/l)	> 5260 mg/m ³ (OECD Test Guideline 403)
Skin corrosion/irritation	: Not classified
	Skin - Rabbit - Result: No skin irritation - 4 h
Serious eye damage/irritation	: Not classified
	Eyes - Rabbit - No eye irritation - (OCED Test Guideline 405)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity - single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful if absorbed through skin. May cause skin irritation.
Symptoms/effects after eye contact	: Contact may cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
L-VALINE (13C5, 99%) (72-18-4 (Unlabeled))	
LC50 fish 1	> 10 g/l Danio rerio (zebra fish) - (OECD Test Guideline 203) 96 h
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ECS0 Daphnia 1 > 10 g/l Daphnia magna (Water filea) - (OECD Test Guideline 202) 24 h 12.2. Persistence and degradability LvALINE (13C5, 99%) (72-164 (Unlabeld)) Persistence and degradability Aerobic - exposure time: 28 d. 12.3. Bioaccumulative potential LvALINE (13C5, 99%) (72-164 (Unlabeld)) Lug Pow -2.259 at 20 °C (68 °F) 12.4. Mobility in soil No additional information available 12.5. Results of PBT and VPB assessment No additional information available 12.6. Other adverse effects No additional information available 12.6. Waster trainment methods Coffer surplus and non-recycluble solutions to a licensed disposal company. Contact licensed disposal company to dispose of this material. Dispose of an ontobuble solution to a licensed disposal company. Contact licensed disposal company to dispose of this material. Dispose dot as unused product.		
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14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code		

Not applicable

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: Regulatory information	
15.1. US Federal regulations	
L-VALINE (13C5, 99%) (72-18-4 (Unlabeled))	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

15.2. International regulations

CANADA

L-VALINE (13C5, 9	99%) (72-18-4 (Unlabeled))
Listed on the Cana	adian DSL (Domestic Substances List)

15.2.1. **National regulations**

No additional information available

15.3. US State regulations

ion of our regulation	
L-VALINE (13C5, 99%)(72-18-4 (Unlabeled))	
U.S California - Proposition 65 - Carcinogens List	No
U.S California - Proposition 65 - Developmental Toxicity	No
U.S California - Proposition 65 - Reproductive Toxicity - Female	No
U.S California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	U.S Pennsylvania - RTK (Right to Know) List U.S New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information	
Other information	: This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.
NFPA health hazard	: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.
Hazard Rating	
Health	: 0 Minimal Hazard - No significant risk to health
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard

CIL Substance SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product