



**L-VALINE**  
**CAS NO 72-18-4**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

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

**1.1 Product identifiers**

Product name : L-Valine

CAS-No. : 72-18-4

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi -110002  
INDIA

Telephone : +91 11 49404040  
Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**2.2 Label elements**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**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.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Synonyms : (S)- -Aminoisovaleric acid  
L-2-Amino-3-methylbutanoic acid

Formula : C<sub>5</sub>H<sub>11</sub>NO<sub>2</sub>

Molecular weight : 117.15 g/mol

CAS-No. : 72-18-4

EC-No. : 200-773-6

No components need to be disclosed according to the applicable regulations.

## **SECTION 4: First aid measures**

### **4.1 Description of first aid measures**

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### **In case of skin contact**

Wash off with soap and plenty of water.

#### **In case of eye contact**

Flush eyes with water as a precaution.

#### **If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### **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**

No data 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 substance or mixture**

Carbon oxides, Nitrogen oxides (NOx)

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

No data available

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing vapours, mist or gas.

For personal protection see section 8.

### **6.2 Environmental precautions**

No special environmental precautions required.

### **6.3 Methods and materials for containment and cleaning up**

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non Combustible Solids

### **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

### 8.2 Exposure controls

#### Appropriate engineering controls

General industrial hygiene practice.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance le (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| a) Appearance                                   | Form: crystalline<br>Colour: white     |
| b) Odour  | odourless                              |
| c) Odour Threshold                              | No data available                      |
| d) pH   | No data available                      |
| e) Melting point/freezing point                 | Melting point/range: 295 - 300 °C      |
| f) Initial boiling point and boiling range      | No data available                      |
| g) Flash point                                  | No data available                      |
| h) Evaporation rate                             | No data available                      |
| i) Flammability (solid, gas)                    | No data available                      |
| j) Upper/lower flammability or explosive limits | No data available                      |
| k) Vapour pressure                              | No data available                      |
| l) Vapour density                               | No data available                      |
| m) Relative density                             | No data available                      |
| n) Water solubility                             | 88.5 g/l at 25 °C - completely soluble |

- |    |  |                          |
|----|--|--------------------------|
| o) | Partition coefficient: n-octanol/water | log Pow: -2.259 at 20 °C |
| p) | Auto-ignition temperature              | No data available        |
| q) | Decomposition temperature              | No data available        |
| r) | Viscosity                              | No data available        |
| s) | Explosive properties                   | No data available        |
| t) | Oxidizing properties                   | No data available        |

## 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)  
Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - female - > 2,000 mg/kg(L-Valine) (OECD Test Guideline 423)

LC50 Inhalation - Rat - male and female - 4 h - > 5,260 mg/m<sup>3</sup>(L-Valine) (OECD Test Guideline 403)

LD50 Intraperitoneal - Rat - 5,390 mg/kg(L-Valine)

Remarks: Behavioral:Muscle contraction or spasticity. Lungs, Thorax, or Respiration:Dyspnea.  
Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

#### Skin corrosion/irritation

Skin - Rabbit(L-Valine)

Result: No skin irritation - 4 h (OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit(L-Valine)

Result: No eye irritation - 1 h (OECD Test Guideline 405)

#### Respiratory or skin sensitisation

- Mouse(L-Valine)

Result: Does not cause skin sensitisation. (OECD Test Guideline 429)

**Germ cell mutagenicity**

Mouse(L-Valine)

lymphocyte

Result: negative

**Carcinogenicity**

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.

**Reproductive toxicity**

No data available(L-Valine)

**Specific target organ toxicity - single exposure**

No data available(L-Valine)

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available(L-Valine)

**Additional Information**

Repeated dose toxicity - Rat - female - Oral - No observed adverse effect level - 666 mg/kg(L-Valine)

RTECS: YV9361000

The levorotary (l) forms of leucine, isoleucine, and valine have been found to have tumor-promoting activity for bladder carcinomas., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(L-Valine)

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

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 10 g/l - 96 h(L-Valine)  
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates Immobilization EC50 - Daphnia magna (Water flea) - > 10 g/l - 24 h(L-Valine)  
(OECD Test Guideline 202)

**12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d(L-Valine)  
Result: 82 % - Readily biodegradable  
(OECD Test Guideline 301F)

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available(L-Valine)

**12.5 Results of PBT and vPvB assessment**

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.

**12.6 Other adverse effects**

No data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## SECTION 16: Other information

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.