

**SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION-----**

**Product Name** L-Valine  
**Product Code(s)** VB0172  
**Recommended Use** For Laboratory Research Use Only  
Not for Human or Animal Drug Use

**SECTION 2. ----- HAZARDS IDENTIFICATION -----**

**Classification of the substance or mixture**

Not a hazardous substance or mixture.

**GHS Label elements, including precautionary statements**

Not a hazardous substance or mixture.

**Hazards not otherwise classified (HNOC) or not covered by GHS - none**

**SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----**

Chemical Name	EC No.	CAS-No	Weight %
L-Valine	200-773-6	72-18-4	95-100

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

**SECTION 4. ----- 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.

**Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

**Indication of any immediate medical attention and special treatment needed**

No data available

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides (NOx)

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data available

**SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----**

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

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

**Environmental precautions**

No special environmental precautions required.

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

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

**Reference to other sections**

For disposal see section 13.

**SECTION 7. ----- HANDLING AND STORAGE-----**

**Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

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

Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): 13: Non Combustible Solids

**Specific end use(s)**

Apart from the uses mentioned in section 1 no other specific uses are stipulated

**SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----**

**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.

Full contact

through time: 480 min  
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material:  
Nitrile rubber

Minimum layer thickness: 0.11 mm Break  
through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)  
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail [sales@kcl.de](mailto:sales@kcl.de),  
test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### 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 levels of dusts are desired, use type N95 (US) or type P1 (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 -----

### Appearance

Form	crystalline
Colour	white

### Safety data

pH	No data available
Melting point/freezing point	Melting point/range: 295 - 300 °C (563 - 572 °F)
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	No data available
Density	No data available
Water solubility	88.5 g/l at 25 °C (77 °F) - completely soluble

Relative vapour density	No data available
Odour	odourless
Odour Threshold	No data available
Evaporation rate	No data available

**SECTION 10. -----STABILITY AND REACTIVITY -----**

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

No data available

**Conditions to avoid**

No data available

**Incompatible materials**

Strong oxidizing agents

**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 -----**

**Acute toxicity**

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

LC50 Inhalation - Rat - male and female - 4 h - > 5,260 mg/m3  
(OECD Test Guideline 403)

Dermal: No data available

LD50 Intraperitoneal - Rat - 5,390 mg/kg

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

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

**Serious eye damage/eye irritation**

Eyes - Rabbit

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

**Respiratory or skin sensitisation**

- Mouse

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

**Germ cell mutagenicity**

Mouse lymphocyte

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

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity - Rat - female - Oral - No observed adverse effect level - 666 mg/kg 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.

**SECTION 12. ----- ECOLOGICAL INFORMATION -----**

**Toxicity**

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

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

**Persistence and degradability**

Biodegradability                      aerobic  
Result: 82 % - Readily biodegradable  
Method: OECD Test Guideline 301F

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**PBT and vPvB assessment**

No data available

**Other adverse effects**

No data available

**SECTION 13. ----- DISPOSAL CONSIDERATIONS -----**

**Product**

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

**Contaminated packaging**

Dispose of as unused product.

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**SECTION 15. ----- REGULATORY INFORMATION -----**

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

Further information: no limited for paper copy, just for internal uses.  
For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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**End of SDS**