

MATERIAL SAFETY DATA SHEET

D-ALANINE
MSDS NO.012

SECTION 1- MATERIAL/COMPANY IDENTIFICATION

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|----------------------------|--|
| Chemical Name | D-Alanine |
| Company Name | Musashino Chemical (China) Co., Ltd. |
| Address | No.66 Chunfeng Rd. Economic & Technological Development Zone of Yichun, Jiangxi. 336000 China |
| Charge Department for MSDS | Safety Management Department |
| Responsibility for MSDS | Fan Gui-Zeng |
| Tel. | +86-795-3156266 |
| Fax | +86-795-3196986 |
| Emergency Tel. | +86-795-3156282 |

SECTION 2- HAZARDS IDENTIFICATION

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|---------|----------------|
| Hazards | Not applicable |
|---------|----------------|

SECTION 3- COMPSITION/INFORMATION ON INGREDIENTS

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| Chemical name | D-Alanine |
| Formula | $\text{CH}_3\text{CH}(\text{NH})\text{COOH}$ |
| Molecular Weight | 89.1 |
| CAS NO. | 338-69-2 |

SECTION 4- FIRST AID MEASURES

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| Skin contact | Immediately remove all contaminated clothing, including footwear. Flush skin and hair with plenty of water or tepid water. |
| Eye contact | Immediately hold eyelids apart and flush eyes with plenty of water at least 15minutes. If irritation persists, call a physician. |

SECTION 5- FIRE FIGHTING MEASURES

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| Fire extinguish | Use water spray or extinguishing media |
| Extinguishing media | Carbon dioxide(CO_2), foam |
| Hazards | Not applicable |

SECTION 6- ACCIDENTAL RELEASE MEASURES

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| Methods for cleaning up | Place spilled material in clean, dry, sealable, labeled container Clean up the leaked place with plenty of water. |
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SECTION 7- HANDLING AND STORAGE

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| Handling | Keep the container well when handling. Handle the materials on clean clothes and in a cleaned room. Avoid dust formation. |
| Storage | Keep container tightly closed. Keep in properly labeled containers. Store in areas shielded the light, and below room temperature. Keep away from strong acids and strong oxidizers. |
| Packaging material | Plastic containers, Paper drum with plastic liner. |

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Personal protection equipment | Wear personal protective equipment. Avoid contact with skin and eyes. |
| Hygiene measures | Set up safety shower, hands washer and eyes washer nearby handling the materials. Indicate the positions distinctly. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. |

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance | White powder or granular |
| Melting point | 289~291℃ |
| Solubility | Water 164.0g/L (25℃) |

SECTION 10- STABILITY AND REACTIVITY

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| Stability | Stable. |
| Materials to avoid | Avoid oxidizing agents, acid. |
| Hazardous decomposition products | Carbon oxides |

SECTION 11- TOXICOLOGICAL INFORMATION

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| Acute toxicity | LD50: >7870 mg/kg bw. (mouse, ivll) LD50: 4700 mg/kg bw |
| Tumorigenic effects | Not applicable |

SECTION 12- ECOLOGICAL INFORMATION

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|--------------------------------|--------------------------|
| Solubility | Good |
| Chemical Oxygen Demand (COD) | 0.01 g O ₂ /g |
| Biological Oxygen Demand (BOD) | 0.71 g O ₂ /g |

SECTION 13- DISPOSAL CONSIDERATIONS

Contaminated packaging

Decontaminate empty containers with water, dilute with water and flush to waste system. Recycle containers if possible.

Further information

Treatment, storage, transportation, and disposal must be in accordance with local regulations.

SECTION 14- TRANSPORTATION INFORMATION

Packing Information

Label the package and mark the products name, lot number, weight etc.

Other information

Delivery man should bring the MSDS. Avoid the package damaged ,material let out and dangerous behavior such as falling.

SECTION 15- REGULATORY INFORMATION

Not applicable

SECTION 16- OTHER INFORMATION

Revision Date

2020/06/01

LD50

Median lethal dose

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