



TCI (Shanghai) DEVELOPMENT CO., LTD.

Revision number: 1

Revision date: 09/05/2019

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SAFETY DATA SHEET

1. IDENTIFICATION

Product name: 5-Amino-1H-tetrazole
Product code: A0427
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Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable solids Category 2

HEALTH HAZARDS

Acute toxicity (Oral) Category 4

Acute toxicity (Dermal) Category 4

Acute toxicity (Inhalation) Category 4

ENVIRONMENTAL HAZARDS

Not classified

Label elements

Pictograms or hazard symbols



Signal word

Warning

Hazard statements

Flammable solid

Harmful if swallowed, in contact with skin or if inhaled

Precautionary statements

[Prevention]

Keep away from heat, sparks, open flames and hot surfaces. -No smoking.
Ground and bond container and receiving equipment.
Use explosion-proof electrical, ventilating and lighting equipment.
Avoid breathing dust, fume, mist, vapors or spray.
Use only outdoors or in a well-ventilated area.
Do not eat, drink or smoke when using this product.
Wash hands and face thoroughly after handling.
Wear protective gloves, protective clothing, eye protection.

[Response]

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor if you feel unwell. Take off contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|---------------------------|--------------------------------|
| Substance/mixture: | Substance |
| Components: | 5-Amino-1H-tetrazole |
| Percent: | >98.0%(HPLC)(T) |
| CAS RN: | 4418-61-5 |
| Chemical Formula: | CH ₃ N ₅ |

4. FIRST AID MEASURES

| | |
|------------------------------------|--|
| Inhalation: | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Skin contact: | Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. |
| Eye contact: | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion: | Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. |
| Protection of first-aiders: | A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles. |

5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| Suitable extinguishing media: | Dry chemical, foam, water spray, carbon dioxide. |
| Specific hazards arising from the chemical: | Explosion risk in case of fire. Fight fire remotely due to the risk of explosion. Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume. |
| Precautions for firefighters: | Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. |
| Special protective equipment for firefighters: | When extinguishing fire, be sure to wear personal protective equipment |

6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| Personal precautions, protective equipment and emergency procedures: | Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc. |
| Environmental precautions: | Prevent product from entering drains. |
| Methods and materials for containment and cleaning up: | Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. |
| Prevention of secondary hazards: | Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. |

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Be careful not to cause leakage, overflow, or dispersion. Steam should not be generated unnecessarily. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Avoid shock and friction. Wash hands and face before breaks and immediately after handling the product. Use a local exhaust if dust or aerosol will be generated.

Advice on safe handling: Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool and dark place. Be sure not to give the container unexpected impacts, such as falling down or falling off.

Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection: Dust respirator. Follow local and national regulations.

Hand protection: Protective gloves.

Eye protection: Safety glasses. A face-shield, if the situation requires.

Skin and body protection: Protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Solid

Form: Crystal - Powder

Colour: White - Almost white

Odour: No data available

pH: No data available

Melting point/freezing point: 201°C

Boiling point/range: No data available

Flash point: No data available

Flammability or explosive limits:

Lower: No data available

Upper: No data available

Relative density: No data available

Solubility(ies):

[Water] Slightly soluble (12g/L, 18°C)

[Other solvents]

Soluble: Alcohols

Insoluble: Ether

Log Pow: -3.41

10. STABILITY AND REACTIVITY

Chemical stability: Stable under proper conditions.

Possibility of hazardous reactions: May explosively decompose on heating, shock, friction, etc.

Conditions to avoid: Heat, Spark, Open flame, Static discharge, Shock, Friction

Incompatible materials: Oxidizing agents, Strong acids, Bases, Metals

Hazardous decomposition products: Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

| | |
|---------------------------------------|-------------------------|
| Acute Toxicity: | ipr-mus LD50:2500 mg/kg |
| Skin corrosion/irritation: | No data available |
| Serious eye damage/irritation: | No data available |
| Germ cell mutagenicity: | No data available |
| Carcinogenicity: | |
| IARC = | No data available |
| NTP = | No data available |
| Reproductive toxicity: | No data available |
| RTECS Number: | XF7465000 |

12. ECOLOGICAL INFORMATION

| | |
|---|---|
| Ecotoxicity: | |
| Fish: | No data available |
| Crustacea: | No data available |
| Algae: | No data available |
| Persistence / degradability: | 5 % (by BOD) , 9 % (by TOC) , 0 % (by HPLC) |
| Bioaccumulative potential(BCF): | No data available |
| Mobility in soil | |
| Log Pow: | -3.41 |
| Soil adsorption (Koc): | No data available |
| Henry's Law (PaM³/mol): | 1.33 x 10 ⁻⁹ |

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

| | |
|------------------------------|----------------------------------|
| Hazards Class: | 4.1: Flammable solid. |
| UN-No: | 1325 |
| Proper shipping name: | Flammable solid, organic, n.o.s. |
| Packing group: | III |

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

16. OTHER INFORMATION

The reference company name of written contents

| | |
|-----------------------------|--|
| Company: | TCI (Shanghai) DEVELOPMENT CO., LTD. |
| Address: | No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China |
| Department: | Technical Information Department |
| Emergency telephone: | 0532-83889090 |
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This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority.

The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.