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SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: L-(-)-Tyrosine

Product code: T0550

Company: TCI (Shanghai) DEVELOPMENT CO., LTD.

Address: No.96 Pu Gong Road, Shanghai Chemical Industry Park, Shanghai 201507 China

Responsible Department: Sales Department +86-(0)21-67121386 +86-(0)21-67121385 e-mail: sales@tcishanghai.com.cn

Revision number: 1

2. HAZARDS IDENTIFICATION

Classification of the GHS PHYSICAL HAZARDS

PHYSICAL HAZARDS Not classified

HEALTH HAZARDS

Skin corrosion/irritationCategory 2Serious eye damage/eye irritationCategory 2AENVIRONMENTAL HAZARDSNot classified

GHS label elements

Pictograms or hazard symbols



Signal word Warning

Hazard statement Causes skin irritation

Causes serious eye irritation

Precautionary statements

[Prevention] Wash hands thoroughly after handling.

Wear protective gloves/eye protection/face protection.

[Response] IF IN EYES: 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. IF ON SKIN: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

3. COMPOSITION/INFORMATION ON INGREDIENTS

 $\begin{array}{lll} \textbf{Substance/mixture:} & \textbf{Substance} \\ \textbf{Component(s):} & \textbf{L-(-)-Tyrosine} \\ \textbf{Percent:} & >98.5\%(T) \\ \textbf{CAS Number:} & 60-18-4 \\ \textbf{Synonyms:} & \textbf{H-Tyr-OH} \\ \textbf{Chemical Formula:} & \textbf{C}_9\textbf{H}_{11}\textbf{NO}_3 \\ \end{array}$

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Get medical advice/attention if you feel unwell.

4. FIRST AID MEASURES

Skin contact: Remove/Take off immediately all contaminated clothing. Gently wash with plenty of

soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Eve 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.

Get medical advice/attention if you feel unwell. Rinse mouth. Ingestion:

Protection of first-aiders: A rescuer should wear personal protective equipment, such as rubber gloves and air-

tight goggles.

5. FIRE-FIGHTING MEASURES

Specific hazards:

Specific methods:

Suitable extinguishing

media:

Dry chemical, foam, water spray, carbon dioxide.

generate poisonous fume.

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: Remove movable

Take care as it may decompose upon combustion or in high temperatures to

containers 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

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.

7. HANDLING AND STORAGE

Handling

up:

Handling is performed in a well ventilated place. Wear suitable protective equipment. **Technical measures:**

Prevent dispersion of dust. Wash hands and face thoroughly after handling.

Use a local exhaust if dust or aerosol will be generated.

Advice on safe handling:

Storage

Storage conditions: Keep container tightly closed. Store in a cool and dark place.

Avoid contact with skin, eyes and clothing.

Store away from incompatible materials such as oxidizing agents.

Packaging material: Law is followed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust as possible so that workers should not be

exposed directly. Also install safety shower and eye bath.

Personal protective equipment

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

Hand protection: Protective gloves.

Safety glasses. A face-shield, if the situation requires. Eye protection: **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 White - Almost white Color: No data available Odor: No data available :Ha

9. PHYSICAL AND CHEMICAL PROPERTIES

Melting point/freezing point:No data availableBoiling Point/Range:No data availableFlash Point:No data available

Explosive limits

Lower:No data availableUpper:No data availableDensity:No data available

Solubility: Slightly soluble in: Acetic acid

Insoluble in: Water (0.5g/L 25°C) Alcohol Ether Acetone

log Pow = 2.26

10. STABILITY AND REACTIVITY

Stability: Stable under proper conditions.

Reactivity: No special reactivity has been reported.

Incompartible materials: oxidizing agents

Hazardous Decomposition Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx)

Products:

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: ipr-mus LD50:>1450 mg/kg

Skin corrosion/irritation: No data available
Serious eye No data available

damage/irritation:

Germ cell mutagenicity: sce-hmn-lym 10 mg/L

Carcinogenicity:

IARC = No data available
NTP = No data available
Reproductive toxicity: No data available
RTECS Number: YP2275600

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: No data available
Crustacea: No data available
Algae: No data available
Persistence / degradability: No data available
Bioaccumulative No data available

potential(BCF): Mobillity in soil

log Pow: 2.26

Soil adsorption (Koc): No data available Henry's Law No data available

constant(PaM³/mol):

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class: Does not correspond to the classification standard of the United Nations

UN-No: Not Listed

15. REGULATORY INFORMATION

Safe management ordinance of dangerous chemical product (State Council announces on January 26, 2002): 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: R&D (Information Management) Department

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