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Revised

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MATERIAL SAFETY DATA SHEET L-THREONINE

1. Substance / preparation and company name

Product

: L - Threonine 98.5 % Feed Grade

Manufacturer

: PT. Cheil Jedang Shenyang

#38 YuNong Road ShenBei New District ShenYang LiaoNing China

110164

Emergency Phone

: +86-024-31410001

2. Composition / information on ingredients

Composition

: L - Threonine 98.5 %

Chemical Family

: Amino Acid (Essential)

Formula

: C4H9NO3

Molecular Weight

: 119.12

Structure Formula

: CH3 - CH (OH) CH - (NH2) COOH

3. Possible hazard

No extraordinary risks for humans and environment

4. First aid measures

General recommendation

: Avoid contact

After inhalation

: Remove individual to fresh air

After skin contact

: Wash area thoroughly with soap and water

After eye contact

: Wash eye with water for 15 minutes

After swallowing

: Drink large amounts of water

5. Fire fighting measures

Flash point

: None

Auto ignition Temperature

: N/A

Flammable limit in air

: None Flammable

Extinguishing Media

: Water

Special Fire Fighting Procedure

: Should wear protective clothing and respiratory protection

Unusual Fire and Explosion Hazard

: Not a fire hazard

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6. Accidental release measures

Method of cleaning up

: Wash area with water . avoid high pressure rinsing

7. Handling & storage

Handling

: Recommended to wear glove and face mask if excessive handling

is necessary

Storage

: Recommended to be stored in clean and dry condition, under

ambient temperature, sheltered from sunlight and avoid from

harmful substance

Work place

: Keep to be clean.

8. Exposure control and personal protection

Precautionary measures

: Give adequate ventilation to the premises where the product is

stored and/or handled.

Respiratory protection

: Not needed for normal use.

Protection or hands

: Not needed for normal use.

Eye protection

: Not needed for normal use.

Protection for skin

: No special precaution must be adopted for normal use.

9. Physical and chemical properties

Bulk Density

 $: 0.700 \sim 0.900 \text{ g/ml}$

Appearance and Odor

: White or pale brownish powder, Odorless, Having characteristic taste

Solubility in Water

: 9.76 g/100 g water (20 oC)

Percent Volatile

: N/A

Evaporation Rate

: N/A

Melting point

: 256 oC

10. Stabilty and reactivity

Stability

: Stable if stored in dry conditions in sealed

or closed containers

Conditions to avoid

: Heating to decomposition

Substances to avoid

: Strong oxidizers

Hazardous reaction

: None

11. Toxicology

Eyes

: Very slightly irritant product

Skin

: Not a skin sensitizer

12. Ecology

Degradability

: High bio degradable

Bio accumulation

: No

Toxicology

: Not toxic for wild animals and plants



LD 50:3 g/kg (IP in Rat)

13. Eliminations and considerations

Recover if possible. In so doing, comply with the local and national regulations currently in force

14. Transports information

Proper delivering name

: L - Threonine

Proper delivering condition

: Stored in closed and sealed container

Means of transportation

: Sea : By ship

Air: By aeroplane

Packaging

: 25 Kg with 1-ply P.E inner &3-ply P.P exterior

800 / 825 kg P.P Woven bag PE laminated

15. Regulatory informations

88/379/EEC (Classification and Labelling):

The preparation should not be considered as dangerous accordingly to dir. 88/379/EEC.

Where applicable, refer to the following regulatory provisions:

Directive 82/501/EEC (Activities linked to risks of serious accidents) and subsequent amendments.

16. Other information

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended. This MSDS cancels and replaces any preceding release.