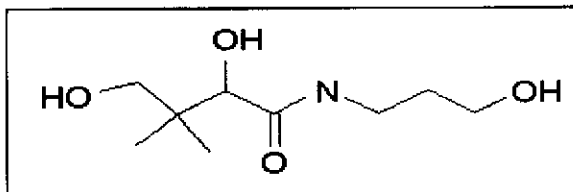


Section 1. Chemical product and company identification

Material Name: DL-Panthenol
INCI Name: Panthenol
Company Information: Manufacturer:
ZHEJIANG HANGZHOU XINFU PHARMACEUTICAL CO.,LTD.
Linglong Economic Lin'an Hangzhou P.R. China
Tel: 0086-571-6375259/63757919
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Section 2. Composition and Information on Ingredients

Chemical Name: DL-Panthenol
Synonyms: -D(+) & L(-) - α , γ -Dihydroxy-N-(3-hydroxypropyl)- β
-DL-Pantothenyl Alcohol
-Panthenol
-Provitamin B5
Empirical formula: $C_9H_{19}NO_4$



Molecular Weight: 205.25
CAS number: 16485-10-2
EINECS number: 201-327-3
Characterization: B-group provitamin; alcohol analogue of D-pantothenic acid (vitamin B5)

Section 3. Hazards Summary

No particular hazards known.

Acute Health Effects:

Skin and eye contact may result in slight irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Reproductive system: Not available.

There are no known chronic effects associated with this material. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4. First-aid Measures

Eye Contact

Immediately rinse eyes with running water for at least 20 minutes, keeping eyelids open. Cold water may be used. Don't use an eye ointment. If irritation develops, seek immediate medical attention.

Skin Contact

If the chemical gets spilled on a clothes portion of the body, remove the contaminated clothes as quickly as possible. Protecting your own hands and body. If the chemical touches the victim's exposed skin, such as the hands: gently and thoroughly wash the contaminated skin with running water and soap. Be particularly careful to clean folds, crevices and groin. Cold water may be used. Cover the irritated skin with an emollient. Wash contaminated clothing before reusing. If irritation develops, seek immediate medical attention.

Inhalation

Move to fresh air. Loosen tight clothing such as a collar, tie, belt or waistband. Aid in breathing. If breathing is difficult, administer oxygen. If the victim can't breathe, perform artificial resuscitation. Seek immediate medical attention if necessary.

Ingestion

Remove dentures if any. If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Loosen tight clothing such as a collar, tie, belt or waistband. Never give an unconscious person anything to ingest. Seek immediate medical if necessary.

Section 5. Fire-fighting measures

Flammability	May be combustible at high temperature
Auto-ignition	Not available
Flash Points	Not available
Flammable Limits	Not available

Combustion Products

These products are toxic carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂ ...).

Fire Hazards

Slightly flammable in presence of open flames and sparks of heat.

Explosion Hazards

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

No additional information is available regarding the risks of explosion.

Fire Fighting Media and Instructions

SMALL FIRE: Use DRY chemicals CO₂, water spray or foam .

LARGE FIRE: Use water spray, fog or foam. Don't use water jet.

Section 6. Accidental release measures

Spill Cleanup instructions

In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution. Use a broom to put the material into a convenient waste disposal container as far as possible. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section 7. Handling and storage

Handling

Technical measure: - processing in closed systems, if possible superposed by inert gas (e.g. nitrogen)

- local exhaust ventilation necessary

- take precautionary measures against electrostatic charging

Suitable material: - stainless steel, glass, polyethylene, enamel

Storage

Storage conditions: - room temperature

- protected from humidity

Validity: - 24 months, less than 25°C, in the unopened original container, see "best use before" data stated on the label

Packaging materials: - tightly closing, material: stainless steel, glass, Polyethylene

Handling

keep container dry as it's hygroscopic. Keep away from heat and sources of ignition, Mechanical exhaust required. When not in use, tightly seal the container and store in a cool, dry, and dark place. Store in a refrigerator, if possible. Avoid excessive heat and light. DO NOT ingest. DO NOT breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek immediate medical attention. Treat Always stores away from incompatible compounds such as oxidizing agents.

Storage:

Storage Condition: room temperature; protected from humidity; in the unopened original container, see "best use before" date stated on the Label.

Section 8. Exposure controls and personal protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust respirator. Boots, glasses, Gloves. A MSHA/NIOSH approved respirator must be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a

specialist before handling this product.

Exposure Limits Not available

Section 9. Physical and chemical properties

Color	similar to white
Appearance (at 20°C)	White to creamy crystalline powder
Appearance	powder
Odor	Slight, characteristic odor
Solubility	miscible in water, ethanol, propylene glycol Immiscible in oils and fats
Melting Point	64.5-68.5 °C
PH (5% solution):	9.0~10.5
Specific Gravity	1.2
Molecular Weight	205.25
Flash Point	> 140°C
Boiling Point	118°C to 120°C(244.4 to 248°F°C)at 2.7 Pa
Autoignition temp.:	405°C

Section 10. Stability and reactivity

Stability

Stable if stored under proper conditions. (See Section 7 for instructions). Stable to air and light.

Conditions to avoid

Humidity and warming. Store in a refrigerator, if possible. Avoid excessive heat and light.

Materials to avoid: -bases, acids, carbon dioxide, alkali metals

Incompatibilities

Incompatible with oxidizing agents.

Section 11. Toxicological information

Acute toxicity:	-LD ₅₀ >5'000 mg/kg (oral, mice)
	-LD ₅₀ >2'200 mg/kg (percutaneous, guinea pigs)
Acute Irritation:	-skin: no irritate (rabbit)
	-eye: inconsequential irritate (rabbit)
Sensitization:	-no positive sensitization response is observed in the experimental guinea pigs.

Acute Toxic Effects

No specific information is available in our data base regarding the toxic effects of this material. However, exposure to any chemical should be kept to a minimum. Skin and eye contact may result in irritation. May be harmful if inhaled or ingested. Always follow safe industrial hygiene practices and wear proper protective equipment when handling this compound.

Section 12. Ecological information

Inherent biodegradability: -well inherently biodegradable
Ecotoxicity: -barely toxic for fish
-barely toxic for algae
-barely toxic for plankton and shellfish

Section 13. Disposal considerations

Waste Disposal

Recycle, if possible. Consult your local or 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 this substance.

Section 14. Transport information

Note: -not classified by transport regulations
Packing form: - 4G5H
Requirement of transport: - can't mix package with harmful materials

Section 15. Regulation information

WHMIS Classification (Canada) Not available
EEC Risk Statements Not available

Section 16. Other information

Use:

- as pro-vitamin B5 in liquid pharmaceutical specialities, multivitamin products and for topical application in lotions and ointments
- in various formulations for cosmetic applications

Note:

- no biological activity has been defined for L-pantothenic acid ; only the D form has biological activity.
- 1.000g DL-panthenol is equivalent to 0.534g D-Pantothenic acid
- 1.000g DL-panthenol is equivalent to 0.581g D-calcium pantothenate

Declaration:

The information on this material provided as above is accurate with the good faith belief. However, this safety data sheet does not constitute a warranty of any kind, expressed or implied. It is the user's responsibility to implement policies for the safe handling and use of this product, and to determine the suitability of this information for their purpose. In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with medical or remediation personnel.

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