SAFETY DATA SHEET



1. Identification

Product identifier Dexpanthenol

Other means of identification

Catalog number1179504CAS number81-13-0

Synonyms d-Panthenol * Dextro pantothenyl alcohol

Chemical name D-(+)-2,4-Dihydroxy-N-(3-hydroxypropyl)-3,3-dimethylbutyramide

Recommended use Specified quality tests and assay use only.

Recommended restrictions Not for use as a drug. Not for administration to humans or animals.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name U. S. Pharmacopeia
Address 12601 Twinbrook Parkway

Rockville MD 20852-1790 United States

Telephone RS Technical Services 301-816-8129

Website www.usp.org
E-mail RSTECH@usp.org

Emergency phone number CHEMTREC within US & 1-800-424-9300

Canada

CHEMTREC outside US & +1 703-527-3887

Canada

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Hazard symbol None.
Signal word None.

Hazard statement Not available.

Precautionary statement

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise None known.

classified (HNOC)

Supplemental information None.

3. Composition/information on ingredients

Substance

| Chemical name | Common name and synonyms | CAS number | % |
|---------------|----------------------------|------------|-----|
| Dexpanthenol | d-Panthenol | 81-13-0 | 100 |
| • | Dextro pantothenyl alcohol | | |

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1179504 Version #: 03 Revision date: 08-09-2019 Issue date: 04-25-2006

4. First-aid measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Rinse with water. Get medical attention if irritation develops and persists. Eve contact

Rinse mouth. Get medical attention if symptoms occur. Ingestion

Most important

symptoms/effects, acute and

delayed

None known.

Indication of immediate medical attention and special

treatment needed

General information

Provide general supportive measures and treat symptomatically.

Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

5. Fire-fighting measures

Suitable extinguishing media

Unsuitable extinguishing

media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

None known.

Specific hazards arising from

the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Specific methods

As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Use water spray to cool unopened containers.

Use standard firefighting procedures and consider the hazards of other involved materials.

No unusual fire or explosion hazards noted. General fire hazards

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up **Environmental precautions**

Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential.

Conditions for safe storage, including any incompatibilities Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

8. Exposure controls/personal protection

Occupational exposure limits **Biological limit values**

No exposure limits noted for ingredient(s).

Appropriate engineering controls

No biological exposure limits noted for the ingredient(s).

For laboratory operations, use good technique and limit open handling. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.

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Individual protection measures, such as personal protective equipment

Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Eye/face protection

Base the choice of protection on the job activity and potential for contact with eyes or face. An

emergency eye wash station should be available.

Skin protection

Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved Hand protection

or suspended in an organic solvent, wear gloves that provide protection against the solvent.

Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and Other

solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias)

or out-of-doors.

Respirators are generally not required for laboratory operations. Choose respiratory protection Respiratory protection

appropriate to the task and the level of existing engineering controls.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Handling practices in this SDS are recommendations for laboratory use of reference standards. General hygiene

Procedures for any other uses or quantities should be determined after an appropriate considerations

assessment.

9. Physical and chemical properties

Appearance Appearance descriptions are general information and not specific to any USP lot.

Physical state Liquid. **Form** Liquid.

Color Colorless. Clear. Odor Faint odor. **Odor threshold** Not available.

10 Ha

> 32 °F (> 0 °C) Melting point/freezing point

Initial boiling point and boiling 244.4 - 248 °F (118 - 120 °C)

range

Flash point 302.9 °F (150.5 °C) **Evaporation rate** Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits Not available.

Flammability limit - lower (%)

Flammability limit - upper

Not available.

Explosive limit - lower (%) Not available. Explosive limit - upper (%) Not available.

< 0.0000001 kPa at 25 °C Vapor pressure

Vapor density 7.08 (Air=1). Relative density Not available.

Solubility(ies)

Solubility (water) Freely soluble.

Solubility (other) Alcohol: Freely soluble.

Chloroform: Soluble. Ether: Soluble.

Glycerin: Slightly soluble. Methanol: Freely soluble.

Propylene glycol: Freely soluble.

Auto-ignition temperature Not available. Not available. **Decomposition temperature** Not available. Viscosity

Other information

Chemical family Branched aliphatic derivative. Dynamic viscosity 135 mPa.s (248 °F (120 °C))

Molecular formulaC9H19NO4Molecular weight205.25Specific gravity1.2 at 20 ° C

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Strong acids. Strong bases. Oxidizing agents.

Hazardous decomposition

products

Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. NOx.

11. Toxicological information

Information on likely routes of exposure

InhalationKnowledge about health hazard is incomplete.Skin contactKnowledge about health hazard is incomplete.

Eye contact Health injuries are not known or expected under normal use. **Ingestion** Health injuries are not known or expected under normal use.

Symptoms related to the physical, chemical, and

toxicological characteristics

Not available.

Information on toxicological effects

Acute toxicity

| Acute toxicity | | | |
|-----------------------------------|---|---------------|--|
| Product | Species | Test Results | |
| Dexpanthenol (CAS 81-13-0) | | | |
| Oral | | | |
| LD50 | Mouse | 15 g/kg | |
| | Rat | > 10000 mg/kg | |
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. | | |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. | | |

Local effects

Eye irritation Result: Negative. Species: Rabbit Skin irritation Result: Negative. Species: Rabbit

Respiratory or skin sensitization

Respiratory sensitization Knowledge about health hazard is incomplete.

Skin sensitizationBased on available data, the classification criteria are not met.

Buehler test Result: Negative. Species: Guinea pig Organ: Skin.

Germ cell mutagenicity Knowledge about mutagenicity is incomplete.

Mutagenicity

Ames test

Result: Negative.

Carcinogenicity Knowledge about carcinogenicity is incomplete.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity

Specific target organ toxicity -

Knowledge about health hazard is incomplete. Knowledge about health hazard is incomplete.

single exposure

Specific target organ toxicity -

repeated exposure

Knowledge about health hazard is incomplete.

Knowledge about health hazard is incomplete. **Aspiration hazard**

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data is available on the degradability of this substance.

Bioaccumulative potential

No data available. No data available.

Other adverse effects

Mobility in soil

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Local disposal regulations

Dispose of in accordance with local regulations. Dispose in accordance with all applicable

regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Empty containers or liners may retain some product residues. This material and its container must

be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

14. Transport information

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

Not established.

General information

It is the shipper's responsibility to determine the correct transport classification at the time of

shipment.

15. Regulatory information

US federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

Material name: Dexpanthenol USP SDS US SARA 311/312 Hazardous No

chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulations

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|----------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |

^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

 Issue date
 04-25-2006

 Revision date
 08-09-2019

Version # 03

United States & Puerto Rico

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herein.

Material name: Dexpanthenol USP SDS US

Yes