



安徽华恒生物科技股份有限公司
ANHUI HUAHENG BIOTECHNOLOGY CO.,LTD

地址：安徽省合肥市双凤工业园凤锦路 32 号
Address: NO.32, Fengjing Road, Shuangfeng Industrial Park, Hefei, Anhui, CHINA
Tel: 0551-64219588 Fax:0551-65689468 web:www.huahengbio.com

D-Panthenol

EU-REACH Registration No: 01-2119953737-24-0009

1, Product and Company Identification

Product name: D-Panthenol
Manufacturer:
Anhui Huaheng Biotechnology Co., Ltd
No.32, Fengjin Road, Shuangfeng Industrial Park, Hefei, Anhui, CHINA
Tel: +86-0551-64219588
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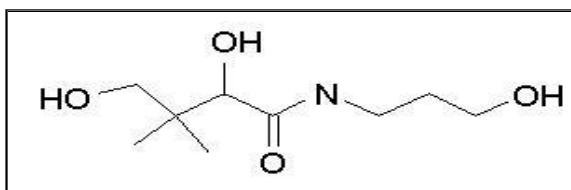
2, Composition/Information on Ingredients

Characterization: B-group provitamin; alcohol analogue of D-pantothenic acid (vitamin B5)

Chemical name: (R)-2,4-Dihydroxy-N-(3-hydroxypropyl)-3,3-dimethylbutanamide

Synonyms: -D(+)- α , γ -Dihydroxy-N-(3-hydroxypropyl)- β ,
 β -dimethyl butan-amide
-Dexpanthenol (INN)
-D-Pantothenyl alcohol
-Panthenol
-Provitamin B5

CAS number: 81-13-0
EINECS number: 201 327 3
Empirical formula: $C_9H_{19}NO_4$



3, Hazards-identification

Most important hazards no particular hazards known

4, First-aid Measures



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Eye contact:	-since immediately with tap water for 10 minutes-open eyelids forcibly -consult physician
Skin contact:	-remove contaminated clothes, wash affected skin with water and -Soap do not use any solvents.
Inhalation:	-remove the casualty to fresh air and keep him/her calm.
Note to physician:	-treat symptomatically

5, Fire-fighting measure

Suitable extinguishing media:	-water spray jet, dry powder, foam, carbon dioxide
Specific hazards:	-formation of toxic and corrosive combustion gases (nitrogen oxides (NO _x)) possible -when using lots of water on burning open containers a burning water-product mix. May overflow, possibly spreading the fire
Protection of fire-fighters	-precipitate gases/vapors/mists with water spray

6, Accidental release measure

Methods for cleaning up	-collect spills with inert absorbent and hand over to waste removal -flush afterwards with plenty of water
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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, aluminium, glass, polyethylene, enamel
Storage	
Storage conditions:	-room temperature -protected from humidity
Validity:	-24months, 20 to 25°C, in the unopened original container, see “best use before” data stated on the label
Packaging materials:	-tightly closing; material: stainless steel, glass, aluminium, Polyethylene

8, Exposure controls personal protection

Engineering Measures:	see 7
Monitoring:	
Threshold value air:	JOEL:10mg/m ³ (as an aerosol, internal Occupational Exposure Limit, defined as 8-hour time-weighted average)
Analysis:	-sampling on filter or impinger and chemical determination.
Personal protective equipment	
Respiratory protection:	-respiratory protection not necessary during normal operations



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-in case of intense formation of aerosols respirator with independent air supply or particle respectively filter mask (depending on the aerosol composition).

Hand protection: -protective gloves
Eye protection: -safety glasses
*1 referring to : Pantothenic acid

9, Physical and chemical properties

Color: colorless to slightly yellow, clear
Form: viscous liquid (room temperature)
Turning water-thin on heating
May crystallize on prolonged storage
Odor: none to faint
With slightly bitter taste
Density: 1.16g/cm³ (20°C)
Viscosity: 238123 cp (20°C)
128 cp (100°C)
Solubility: well soluble, water
well soluble, methanol
well soluble, ethanol
barely soluble, diethyl ether
badly soluble, chloroform
insoluble, oils and fats
Melting temperature: 0°C
Boiling temperature: 210°C(1013mbar)
with decomposition
Vapor pressure: -0.00000003 hpa (20°C)
-2 hpa (80°C)
Flash point (liquid): ≥ 140°C
Ignition point (liquid): 405°C
Note: slightly hygroscopic

10, Stability and reactivity

Stability: -stable under the conditions mentioned in chapter7
-fairly stable to air and light
Conditions to avoid: -humidity -warning
Materials to avoid: -bases, acids, carbon dioxide, alkali metals
Note: -reasonably stable in aqueous solutions if PH is adjusted between 3 and 6 (more stable than pantothenic acid salts solution)
-aqueous solutions can be stabilized with pantolactone
-prolonged heating above 70°C racemisation



11, Toxicological information

Sensitization:	-allergic skin rashes are very rare (human)
Chronic toxicity:	-low toxicity (man); pantothenic acid hyper vitaminosis is unknown

12, Ecological information

Inherent biodegradability:	-well inherently biodegradable 100%, 15d (Zahn-Wellens test, OECD No.302 B)
Ecotoxicity:	-barely toxic for fish (rainbow trout) NOEC (96h) $\geq$ 1000mg/l -barely toxic for algae (<i>Scenedesmus subspicatus</i>) EbC _{Go} (72h)>100mg/l NOEbC(72h) 100mg/l (OECD No. 202)
Air pollution:	-observe local/national regulations

13, Disposal considerations

Waste from residues:	-large amounts; incinerate in qualified installation with flup gas scrubbing -drain very small quantities into wastewater treatment plant -observe local/national regulations regarding waste disposal
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14, Transport information

Note:	-not classified by transport regulations
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15, Regulation information

Note:	-no classification and labeling according to EU,USP,BP
Emission limit (China):	-150mg/m ³ at mass-flux $\geq$ 3kg/h (organic, class 3, own classification)
Water hazard class:	-weekly hazardous for water (own classification according to directive VwVwS of 17.05. 1999)

16, Other information

Use:	-as provitamin B5 in liquid pharmaceutical specialties, multivitamin products and for topical application in lotions and ointments -in varlous formulations for cosmetic applications
Biological activity:	-no biological activity has been defined for pantothenic acid respectively its derivatives; however, only the D form is biologically active
Safety-lab number:	-BS-2592
Note:	-1,000g D-panthenol is equivalent to 1.068g D-pantothenol acid
Edition documentation:	-changes from previous version in sections 15
*1 referring to:	Pantothenic acid



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Dangerous Properties of Industrial Materials, Second Edition (Van Nostrand Reinhold), CAU 760

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