

Technical Information

D-Panthenol 75 W

PRD 30070776

Valid since 05.10.2020
Revision 3.0

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Care Chemicals**Active ingredient for further processing in the cosmetics industry. Improves the appearance of skin and hair****INCI name(s)**

Panthenol

Chemical description

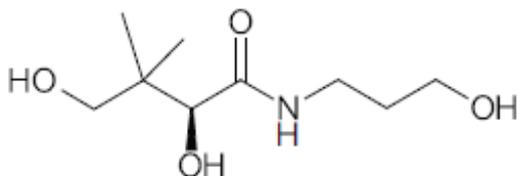
D-Panthenol

Physical form:

Clear, colorless to light yellow liquid

Molecular weight

205.3 g/mol

Molecular FormulaC₉H₁₉O₄N**Structural Formula****CASR-No.**
81-13-0**Ingredient**
Panthenol

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Care Chemicals**Characteristic values**

The specifications stated in the paragraphs 'Quality control data' and 'Additional product descriptive data' finally and conclusively describe the properties of the product.

Quality control data

(Data which is used for quality release and is certified for each batch.)

Test property	Specification	Test method
Appearance	Clear, colorless to light yellow liquid	PM/01055
Identity	must conform	Ph.Eur.
Content of D-Panthenol	min. 75.0 %	PM/00055 (content (uncorr.)-(2.733 x content Aminopropanol))
Content of Aminopropanol	max. 1.0 %	PM/00997
Heavy metals	max. 10 mg/kg	PM/01704
pH value (as is)	5.5 - 7.0	Ph.Eur. 2.2.3
Sulphated Ash	max. 0.20 %	PM/00107

Additional product descriptive data

(Data which is proven statistically but not determined regularly.)

Test property	Specification	Test method
Total combined yeasts and moulds count (TYMC)*	<= 10 CFU/g	Ph.Eur.
Total aerobic microbial count (TAMC)*	<= 100 CFU/g	Ph.Eur.

* Tested on random samples

Storage information**Shelf life**

12 months

Storage temperature

Between + 15 °C and + 25 °C

Storage conditions

In original sealed containers and protected from moisture

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Care Chemicals**Stabilising additives / Auxiliaries****Preservatives**

not present

Antioxidants

not present

Solvents

not present

Others

Citric acid

General information**Raw material basis**

Synthetic: (mineral oil / natural gas)

Composition hints for finished product label**INCI Components****INCI Name (US/EU/CN)**

Panthenol

Content

min. 75 %

Auxiliaries**INCI Name (US/EU/CN)**

Citric Acid

Content

approx. 1 %

Water Content**Content**

max. 25 %

Product properties**Solubility**

Panthenol is readily miscible with water, ethanol, methanol and propylene glycol.
It is insoluble in oils and fats.



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Care Chemicals**Miscellaneous information****Example of use**

Panthenol is an active ingredient for sophisticated cosmetic skin care and hair care products. It improves the appearance of skin, hair and nails.

D-Panthenol is the provitamin of D-Pantothenic acid (Vitamin B5). D-Pantothenic acid plays a key role in the human intermediary metabolism. It is a part of the Coenzym A. Deficiency of Vitamin B5 results in many dermatological disorder.

Coenzym A is important for:

- structure and function of living tissue
- resistance of the mucous membrane
- growth and pigmentation of hair

Role in the skin:

- deep penetrating moisturizer
- stimulates epithelisation
- has wound healing effect
- has an anti-inflammatory effect

Role in the hair:

- long lasting moisturizer
- prevents hair damage
- thickens hair
- improves luster and sheen

Role in nail care:

- improves hydration
- imparts flexibility

Only the D-Panthenol is the provitamin of D-Pantothenic acid (Vitamin B5), not the L-Panthenol.

The human body converts D-Panthenol to Vitamin B5, which is D-Panthenic acid. DL-Panthenol is a lit racemic mixture of D-Panthenol and L-Panthenol. Due to the fact that only D-Panthenol is converted to Vitamin B5 and not

L-Panthenol, the racemic DL-Panthenol has only half of the physiological activity of the D-Panthenol. These include stimulation of epithelisation, wound healing effect and anti-inflammatory effect.

But for all the none physiological activities like moisturizer effect, improvement of hair structure, giving luster and sheen to the hair D- and DL-Panthenol are equally active.



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Care Chemicals

Intended for use as cosmetic ingredient

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