## Sandream Enterprises, LLC

## **DL-Panthenol**

INCI Name:PanthenolCAS No. :16485-10-2Molecular Equation:C9H19NO4Molecular Weight:205.25

Structural Formula:

DL-Panthenol is off-white to cream, crystalline, hygroscopic powder. Any agglomerates must be soft and easily broken. It is a moisturizing and conditioning agent and a source of vitamin B5 for use in hair care and skin care products.

**Solubility:** freely soluble in water, ethanol, methanol and propylene glycol. Soluble in chloroform and in ether; insoluble in vegetable oil, mineral oil and fats.

Odor and Taste: Slight characteristic odor with a slight bitter taste.

Property Specification ( as per USP)

Appearance: off-white to cream crystalline powder

Assay: 99.0-102.0% (calculated on the dried basis)

Identification:

Melting Point:

Normal Reaction
64.5 - 68.5 C

Specific Rotation: between - 0.05° and +0.05°

Loss on Drying: max. 0.5%
Residue on Ignition: max. 0.1%
Limit of Aminopropanol: max. 0.10%

Organic Volatile Impurities: meets the requirements

Heavy Metal: max 10 ppm

<u>Stability and Storage:</u> DL-Panthenol is stable to air and light. If it is stored at around 20<sup>O</sup>C in the tightly sealed original containers, it has a shelf life of at least 24 months. In weekly acidic aqueous solutions, DL-Panthenol is considerably more stable than the salts of pantothenic acid. It is unstable in strong acids and bases.

<u>Usage:</u> DL-Panthenol is applied in almost all types of cosmetic preparations. It cares hair, skin and nails. DL-Panthenol is the provitamin of D-Pantothenic acid (Vitamin B5), which plays a key role in the human intermediary metabolism. Deficiency of Vitamin B5 can result in many dermatological disorders.

Role in the skin: 1, deep penetrating moisturizer 2, stimulates epithelisation (fibroblast proliferation and normal keratinization) 3, wound healing effect 4, anti-inflammatory effect;

**Role in the hair:** 1, long lasting moisturizer 2, prevents hair damage 3, thickens hair 4, improve luster and sheen;

Role in nail care: 1, improves hydration 2, imparts flexibility;

Package: 20 kg carton or 25 kg drum with Aluminum laminated polyethylene.