



ELACTAVIA - ALTN™ (Allantoin)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White, odorless crystalline powder
Physical Form	Powder
Molecular Weight (g/mol)	158.12
Density or Specific Gravity	0.951 g/mL at 25 °C (lit.)
Refractive Index	n _{20/D} 1.442(lit.)
pH (if aqueous solution)	4.5 - 6 (5% in water, 20 °C)
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Chemical Properties	
pKa	8.96(at 25°C)
Thermal Properties	
Melting Point	239 °C
Flash Point	230-234°C
Boiling Point	Decomposes before boiling
Decomposition temperature	Decomposes above melting point
Thermal stability	Stable at room temperature; decomposes at high temperatures
Solvent	
Water	0.4% at 20°C
Ethanol	0.1% at 20°C
Propylenglycol	0.3% at 25°C
Sodium lauryl sulfate (30%)	0.8% at 20°C

2. Processing Methods



Cosmetic cream

Dissolve allantoin in the water phase and heat to ensure complete solubility. Avoid adding during the cool-down phase, as it has limited solubility in cold water and may recrystallize.

Key Ingredients	Indicative Dosage (% w/w)
Water (Aqua)	70%
Glycerin	5%
Cetearyl Alcohol	4%
Caprylic/Capric Triglyceride	6%
Isopropyl Myristate	3%
Stearic Acid	2%
Triethanolamine (TEA)	0.8%
Benzalkonium Chloride (50% sol.)	0.2%
Allantoin	0.5%
Panthenol (Pro-Vitamin B5)	1%
Tocopheryl Acetate (Vitamin E)	0.5%
Dimethicone	2%
Fragrance	0.5%
Phenoxyethanol & Ethylhexylglycerin	1%
Citric Acid (10% solution)	0.4%

Hair shampoo

Add allantoin to the heated water phase to ensure proper dissolution, as it has low solubility in cold water. Mix well to avoid grittiness or sediment in the final shampoo.

Key Ingredients	Indicative Dosage (% w/w)
Primary surfactants	8-12%
Secondary surfactants	2-5%
Butters	20-40%
Allantoin	0.1-1%
Water	40-50%
Other UV Filters, Antioxidants, Humectants, Fragrance/flavor etc.	



Facial Cleansers

When formulating facial cleansers, dissolve Allantoin (typically 0.1-0.5%) in the water phase by heating to ensure full solubility. Avoid overheating, as Allantoin can degrade at high temperatures. Stir gently to maintain clarity in clear formulations.

Key Ingredients	Indicative Dosage (% w/w)
Deionized Water	70%
EDTA-2Na	0.10%
Sodium Cocoamphoacetate	10%
Cocamidopropyl Betaine	8%
Glycerine	5%
Lauryl Glucoside	4%
Panthenol	1%
Allantoin	0.3%

Sunscreen cream

When adding allantoin to sunscreen, dissolve it in the water phase at 0.05-0.5% concentration and heat gently to ensure full solubilization. Maintain final pH between 5.0-7.0 for stability and compatibility with UV filters. Stir thoroughly to ensure uniform dispersion.

Key Ingredients	Indicative Dosage (% w/w)
Homosalate	6-10%
Ethylhexyl Methoxycinnamate	5-9%
Ethylhexyl Salicylate	2-6%
4-Methylbenzylidene Camphor	2-5%
Titanium Dioxide	2-6%
Polydimethylsiloxane	3-8%
Propylene Glycol	3-6%
Allantoin	0.05% to 0.3%
Plant extracts (e.g., safflower extract)	0.3-0.6%
Emulsifiers and thickeners	

3. Dosing by Application

Products	Authorized dosage %
Skin Care	0.5-2%



Products	Authorized dosage %
Hair shampoo	0.1-1%
Other Personal Care	0.2-2%

4. Grade Comparison Summary

Parameter	Pharmaceutical Grade
Purity (% by assay)	≥99.5%
Appearance	White to off-white, odorless crystalline powder
Odor	Odorless
Source	Synthesized, meets pharmacopeial limits
Regulatory Compliance	USP/NF, EP, FDA
Typical Applications	OTC wound care, burn creams, diaper rash products

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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