



ELPROTECT – EPB™ (Ethyl Paraben)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White fine powder
Physical Form	Powder
Odor	mild phenolic
Molecular Weight (g/mol)	166.17
Density or Specific Gravity	1.1708 (rough estimate)
Refractive Index	1.5286 (estimate)
pH (if aqueous solution)	4.5-5.5 (H ₂ O, 20°C)
pH	4.5-5.5 (H ₂ O, 20°C)
Thermal Properties	
Melting Point	114-117°C (lit.)
Boiling Point	297-298 °C (lit.)
Chemical Properties	
pKa	8.34

2. Processing Methods



Hair Conditioner

Add parabens to the heated oil phase to ensure proper dissolution and avoid crystallization. Maintain the final pH of the hair conditioner to ensure preservative effectiveness without compromising product stability.

Key Ingredients	Indicative Dosage (% w/w)
Cetearyl Alcohol	5%
Behentrimonium Chloride	3%
Dimethicone	2%
Glycerin	2%
Cetyl Alcohol	2%
Methylparaben	0.2%
Propylparaben	0.1%
Water	80%
Fragrance/Color, Preservative (other)	0.2-3%

Makeup foundation lotion

In makeup foundation lotion formulations, dissolve parabens (such as methylparaben and propylparaben) in the oil phase or a co-solvent like propylene glycol or ethanol to ensure complete solubility. Add them during the heating phase before emulsification for uniform dispersion. Ensure the emulsion is stable and homogeneous to support preservative efficacy. Maintain the final pH between 4.5 and 7.5, as parabens are most effective within this range.

Key Ingredients	Indicative Dosage (% w/w)
Stearic acid	2%
Cetyl alcohol	4%
Paraffin liquid	20%
Dimethicone	5%
Tween 80	3.65%
Propylparaben	0.02%
Propylene glycol	5%
Xanthan gum	0.3%
Methylparaben	0.18%
Distilled water	50-55%
Other additives	



Lip balm

In lip balm formulations, parabens (like methylparaben or propylparaben) should be dissolved in the melted oil or wax phase, as they are oil-soluble at elevated temperatures. Heat the oil phase to fully incorporate the parabens without degradation. Stir thoroughly to ensure even distribution throughout the balm. Since lip balms are anhydrous, use parabens primarily to protect against contamination during use and storage.

Key Ingredients	Indicative Dosage (% w/w)
Nicotinamide	0.05%
Avobenzone	0.22%
Zinc oxide	0.13%
Titanium dioxide	0.10%
Polyglyceryl-2 triisostearate	30%
Beeswax	5.5%
Olive wax	3%
Alkene wax	4%
Castor oil	18%
Liquid paraffin	24%
Peppermint essential oil	5%
Ethylparaben	0.4%
Chrysanthemum extract	6%

3. Dosing by Application

Products	Authorized dosage %
Cosmetic creams/Lotions	0.1-0.4% (single), up to 0.8% (combined)
Hair Shampoo/Conditioner	0.1-0.4% (single), up to 0.8% (combined)

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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