

Nipagin™ M Sodium

Preservative for the cosmetic industry

Chemical name

Sodium Methyl p-Hydroxybenzoate.

INCI designation

Sodium Methylparaben.

Product properties ^{*)}

Appearance

White powder

Chemical and physical data

pH	9.5- 10.5
Water content	max. 5.0 %
Assay by non aqueous titration	99 - 102 %

Uses

Nipagin M Sodium is a broad spectrum antimicrobial agent designed for preservation of a wide range of cosmetics, toiletries pharmaceuticals. Nipagin M Sodium is suitable to preserve both rinse- off and leave- on formulations.

Nipagin M Sodium is effective against bacteria, molds and yeast. The recommended use level of Nipagin M Sodium to preserve most product types is normally in the range of 0.1- 0.3 % based on the total weight of the finished product.

The Paraben esters have many advantages as preservatives, like broad spectrum antimicrobial activity, effective at low use concentrations, compatible with a

^{*)} These characteristics are for guidance only and not to be taken as product specifications. The tolerances are given in the product specification sheet. For further product properties, specifications, safety and ecological data, please refer to the MSDS.

wide range of cosmetic ingredients, colourless, odourless, well documented toxicological and dermatological acceptability based on human experience (used in cosmetics, food and pharmaceuticals since 1930ies), p-Hydroxybenzoic Acid and a number of its esters occur naturally in a variety of plants and animals, stable and effective over a wide pH- range, etc.

The Sodium Parabens, like Nipagin M Sodium have several additional advantages:

- Nipagin M sodium is highly soluble in cold water for ease of addition.
- No heating stage required for incorporation, thus saving energy and plant occupancy.
- Increased antimicrobial activity at alkaline pH.

Applications

Nipagin M Sodium is designed for preservation of a wide range of cosmetics and toiletries. Nipagin M Sodium is suitable to preserve both rinse- off and leave- on formulations. Formulations which are prone to bacteria contamination an additional antibacterial preservative, like Nipaguard DMDMH might be necessary to add as Nipagin M Sodium provides a higher efficacy against fungi than against bacteria.

Solubility

Water up to 33 %

Incorporation

Nipagin M Sodium is highly soluble in water and so easily incorporated into cosmetic formulations.

It is important to note that, whilst the aqueous solubility in alkaline solution is high, if the pH of the formulated product is acidic the sodium salt reverts to the ester and the low solubility is regained.

pH stability

Nipagin M Sodium remains fully stable over a wide pH range from 3.0- 11.0.

Aqueous solutions of Nipagin M Sodium are not long- term stable at alkaline pH.

Temperature stability

The recommended maximum handling temperature is 80°C.

Microbial activity

Nipagin M Sodium has a broad spectrum of activity which includes the following common spoilage organisms.

Microorganisms	MIC level (%)
Bacteria	
<i>Pseudomonas aeruginosa</i>	0.228
<i>Staphylococcus aureus</i>	0.17
Microorganisms	
Yeasts	
<i>Candida albicans</i>	0.114
Molds	
<i>Aspergillus niger</i>	0.114

Regulatory Status

Nipagin M Sodium can be used up to a maximum concentration of 0.4 % in cosmetic products, no further restrictions. Annex VI, 76/768/EEC (Europe).

Japan: maximum concentration 1 % in cosmetic product, no restrictions.

USA: considered safe as used by Cosmetic Ingredient Review (1984).

Storage instructions

Nipagin M Sodium is stable in sealed original containers. Further information on handling, storage and dispatch is given in the EC safety data sheet.

This information is based on our present state of knowledge and is intended to provide general notes on our products and their uses. It should not therefore be construed as guaranteeing specific properties of the products described on their suitability for a particular application. Any existing industrial property rights must be observed. The quality of our products is guaranteed under our General Conditions of Sale.