

MICRO CARE[®] SB

preservative formulated for all
personal care applications

General Description

Microcare SB is a blend of preservatives which can be used for the gentle preservation of all personal care products. The formulation is prepared as an aqueous solution of the actives, offering ease of handling and dosing in the final product.

Chemical Identification

Active	Sodium benzoate
ingredients:	Potassium (E,E)-hexa-2,4-dienoate
INCI name:	Water (<i>and</i>) Sodium Benzoate (<i>and</i>) Potassium Sorbate

Typical Chemical and Physical Characteristics

Appearance:	Liquid
pH:	ca. 9,0
Miscibility:	Miscible in water, in glycerine and in glycols at maximum recommended level
Shelf life:	18 months from date of manufacture when stored between 20-25°C in original unopened containers

Note: *These figures do not constitute a specification*

Preservative Properties

The preservative activity of **Microcare SB** is maximised at pH 4,5 to 5,0 where the actives are in their undissociated states as their respective organic acids. However, at pH in the range 5 to 5,5 this combination can still be used with good results. Benzoic and sorbic acid act in a complementary nature by suppressing the growth and spore germination of bacteria and moulds respectively.



Recommended Use Levels

Microcare SB is recommended for inclusion in both leave on and rinse off applications in the range 0,2 to 1,0% and should be added to the aqueous phase with mixing as early as possible in the formulation process. It is tolerant to temperatures up to 80°C and pH up to 9. However, to ensure maximum preservation efficacy the pH of the final product should be adjusted to below 5,5. Because of the large variation in the composition of cosmetic products it is important that the preserving effectiveness is evaluated in the final formulation using appropriate microbial challenge tests.

Technical Support

Thor personal care laboratories are fully equipped to provide complete microbiological, analytical and *in vitro* toxicology support for all product applications.

Application Areas

Microcare SB may be used in a wide range of personal care applications including:

- [Shampoos](#)
- [Hair conditioners](#)
- [Styling gels](#)
- [Liquid soaps](#)
- [Bath gels](#)
- [Moisturising creams](#)
- [Body creams and milks](#)
- [Suntan lotions](#)
- [Mascara](#)
- [Lipsticks](#)
- [Eyeliners](#)

Toxicology

Microcare SB is considered to be non-toxic and safe for use in personal care applications in normal and reasonably foreseeable conditions of use at recommended levels.

A safety assessment is available upon request.

Regulatory Aspects

Sodium benzoate and potassium sorbate are among the few preservatives allowed by ECOCERT, BDIH, the Soil Association, Natrue and COSMOS.

In the EU, all the active ingredients are approved with the following limitations:

Sodium benzoate:

Rinse off products, except oral care products: 2,5 % (acid)

Oral care products: 1,7 % (acid)

Leave on products: 0,5 % (acid)

Potassium sorbate:

Sorbic acid (hexa-2,4-dienoic acid) and its salts all applications 0,6 % (acid)

Microcare SB is approved in Europe for use in leave on up to 1,65% and up to 4% in rinse off and in oral care applications.

In Japan, all the active ingredients are approved with the following limitations:

Benzoate:

1,0% of total

Sorbic acid and sorbate:

0,50% of total

Microcare SB is therefore approved in Japan in all applications up to 3,3%.

In the US, all the active ingredients are approved with the following limitations:

Sodium Benzoate and Potassium sorbate:

Safe up to 1%

Microcare SB is therefore approved in the USA in all applications up to 3,3%.

Further Information

For further information please contact your local Thor personal care representative.



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