

BRONOPOL

Preservatives For Focused Protection



INCI

2-Bromo-2-Nitropropane-1,3-diol

CAS number

52-51-7

Appearance

White, dry powder

Solubility

Soluble in water and polar organic solvents

Bronopol strongly inhibits the growth of Gram positive and Gram negative Bacteria. It also is highly effective in eliminating the growth of *Pseudomonas* species, including pathogenic *Pseudomonas aeruginosa*. Its applications include cosmetic, pharmaceutical, toiletry and household products.

When the control of yeasts and molds is required, Bronopol can be combined with other antimicrobials that provide additional anti-fungal activity. Blends of Bronopol and Parabens give excellent coverage of all microbial spectra. High compatibility with cationic, nonionic, anionic and amphoteric surfactants and many other raw materials, including other preservatives, makes Bronopol a very versatile product.

It is soluble in water and other polar solvents such as propylene glycol and isopropanol. We recommend adding Bronopol to aqueous phase as it will prevent the primary bacterial growth that takes place in this medium.

Bronopol breaks down under alkaline conditions and elevated temperatures and should not be used in combination with secondary amines. This can lead to an undesired chemical reaction and formation of nitrosamines. For cold process products, we recommend adding Bronopol from the onset of the formulation preparation process.

The recommended use level for Bronopol ranges from 0.03% to 0.1%.

MINIMUM INHIBITION CONCENTRATIONS (MIC) FOR BRONOPOL

Microorganism	Type	MIC (ppm)
<i>Escherichia coli</i>	Bacteria Gram -	15
<i>Pseudomonas aeruginosa</i>	Bacteria Gram -	15
<i>Burkholderia cepacia</i>	Bacteria Gram -	15
<i>Staphylococcus aureus</i>	Bacteria Gram +	10
<i>Staphylococcus epidermidis</i>	Bacteria Gram +	15
<i>Aspergillus niger</i>	Mold	2000
<i>Candida albicans</i>	Yeast	1250