



KORALONE™ B-120 Preservative In-can Preservative for Household and Industrial & Institutional Products

CAS No. 2634-33-5

EINECS: 220-120-9

General

KORALONE™ B-120 Preservative is an effective antimicrobial agent recommended and widely used in preservation of household products. It is a clear 20% glycolic solution of 1,2-benzisothiazolin-3-one. KORALONE B-120 Preservative is a formaldehyde-free preservative and does not contain any halogen that accumulate in the environment.

Benefits

- Highly effective against bacteria, yeasts and moulds.
- Non specific mode of action, resulting in reduced microbial resistance potential.
- Formaldehyde and formaldehyde releasers free.
- Readily incorporated in household formulations due to its liquid form.
- High purity active ingredient, made evident by its clear light color.
- Compatible and effective with anionic, ester quaternary surfactants, non ionic surfactants and commonly used household product ingredients.
- Stable over a wide range of pH (4 to 12) and temperature conditions up to 50°C.
- Safe to use at recommended use levels.
- Environmentally acceptable: rapidly degrades, does not bioaccumulate and is non persistent in the environment.

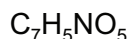
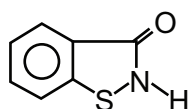
Appearance of KORALONE B-120 Preservative compared with equivalent industry grade



Industry Standard

KORALONE B-120
Preservative

Structure



Formulation and Properties

Chemical Composition

I,2-benzisothiazolinon-3-one (BIT) 20% active ingredient

Inert Ingredients

Propylene glycol and water balance

Physical Properties

The following are typical physical properties of KORALONE™ B-120 Preservative; **they are not to be considered product specifications.**

Appearance Clear amber liquid
Boiling Point..... 100°C
Viscosity at 25°C 250 mPA.s
Freezing point..... minus 10°C
Solubility miscible in water at any ratio
pH at 25°C (@10% in water)..... 12.5
Density at 20°C 1.14 g/ml

Suggested Applications

- **Laundry products**, such as:
 - liquid laundry detergents
 - fabric softeners
 - pre-spotters
- **Liquid detergents**, such as:
 - hand dishwashing detergents
- **Cleaners and polishes**, such as:
 - all purpose cleaners
 - floor and furniture polishes/waxes
 - automotive washes, polishes and waxes
- **Raw materials and surfactants** used in the Household and Industrial & Institutional industry

Microbiological Efficacy

KORALONE B-120 Preservative exhibits outstanding antimicrobial activity, inhibiting a wide variety of gram positive and gram negative bacteria, yeast and moulds. The following tables give for bacteria and fungi the minimum inhibitory concentration (MIC) in ppm active ingredient and in % product as supplied, which inhibited the growth of various micro organisms in M9G Mineral salt media and the minimum bactericidal concentration (MBC) which killed bacteria in M9G Mineral salt media. As shown, KORALONE B-120 Preservative inhibits and killed a wide variety of bacteria at low active ingredient levels.

MIC & MBC Efficacy on Bacteria M9G media pH 7.0

Bacteria Strains	ATCC No.	MIC VALUES		MBC VALUES	
		24 hours contact time		5 days contact time	
		ppm a.i.	% product	ppm a.i.	% product
<i>Burkholderia cepacia</i>	25416	15	0.0075	31	0.0155
<i>Citrobacter freundii</i>	8090	9	0.0045	37	0.0185
<i>Escherichia coli</i>	8739	4.5	0.0022	10.5	0.0052
<i>Enterobacter cloacae</i>	13047	9	0.0045	33	00.16
<i>Klebsiella pneumoniae</i>	10031	6	0.003	19	0.0095
<i>Pseudomonas aeruginosa</i>	9027	32	0.015	89	0.044
<i>Pseudomonas fluorescens</i>	17397	13	0.0065	15	0.0075
<i>Pseudomonas putida</i>	12633	17	0.0085	51	0.0255

<i>Proteus vulgaris</i>	13315	6	0.003	9	0.0045
<i>Staphylococcus aureus</i>	6538	5	0.0025	9	0.0045

KORALONE™ B-120 Preservative inhibits mould and yeast species at low active ingredients levels.

**Efficacy on Mould and Yeast
M9G media pH 5.5**

		MIC VALUES 7 days contact time	
Mould	ATCC No.	ppm a.i.	% product
<i>Alternaria alternata</i>	11680	80	0.004
<i>Aspergillus niger</i>	16404	89	0.044
<i>Chaetomium globosum</i>	6205	10.5	0.005

		MIC VALUES 5 days contact time	
Yeast	ATCC No.	ppm a.i.	% product
<i>Rhodotorula rubra</i>	9449	25	0.0125
<i>Candida albicans</i>	2091	51	0.025

Bacteriostatic and fungistatic tests performed by serially diluting test compounds in Mineral salts media (M9G)+1% yeast extract and 1:100 inoculation with 24-hour broth cultures of test bacterium. Fungistatic tests performed by serially diluting test compounds in potatoes dextrose broth and 1:100 inoculation with 24-hour broth yeast, or mould spore suspension prepared from 7- to 14-day malt culture slants. Minimum inhibitory concentration levels determined visually after 1-day incubation at 30°C for bacteria, 5 days at 25°C for yeast and 7 days for moulds.

ATCC: American type Culture Collection

Recommended Use Levels

KORALONE B-120 Preservative should be dosed in the range of 0.05% to 0.15% as supplied, which is equivalent to 100 ppm to 300 ppm active ingredient. Since the components of household formulations could vary considerably and may have impact on the effect of preservatives, we advise each manufacturer to confirm the efficacy and stability of KORALONE B-120 Preservative in use. KORALONE B-120 Preservative exhibits excellent performance with cobiocides like MCI/MI, bronopol, glutaraldehyde etc.

Safety & Labeling

Please refer to the Safety Data Sheet and product label.

Handling

The processing and use of industrial chemicals requires adequate technical and professional knowledge. In general, avoid eye and skin contact, wear safety goggles, gloves and protective clothing. In case of eye or skin contact, despite precautionary measures, wash immediately and thoroughly with plenty of warm water and obtain medical attention.

Shelf Life

KORALONE B-120 Preservative in original containers under appropriate storage conditions will have a shelf life of 24 months.

Storage

KORALONE B-120 Preservative should be stored at room temperature in tightly sealed original containers. Protect from frost and heat. Any supplies which do freeze must be mixed thoroughly after thawing before they can be used without any loss in efficacy.

Product Stewardship

Dow Microbial Control encourages its customers to review their applications of Dow Microbial Control products from the standpoint of human health and environmental quality. To help ensure that Dow Microbial Control products are not used in ways for which they are not intended or tested, Dow Microbial Control personnel are willing to assist customers in dealing with ecological and product safety considerations. Contact your representative if you need any assistance or information. When considering the use of any Dow product in a particular application, review the latest Safety Data Sheet and country-specific product label to ensure the intended use is within the scope of approved uses and can be accomplished safely. Before handling any of the products mentioned in the text, obtain available product safety information and take necessary steps to ensure safety of use.

For further information visit our website:

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