

KORALONE™ C-309

Highly Efficient Preservative for Household and Industrial & Institutional Products

Description

KORALONE C-309 preservative combines various highly effective isothiazolinone compounds in a single product. The well-known active substances methylisothiazolinone (MI) and methylchloroisothiazolinone (MCI) are contained, however, in an inverse ratio compared to the established formulations.

This preparation combines an initial rapid and powerful performance boost with a long term broad spectrum activity.

KORALONE C-309 is a glycolic solution of benzisothiazolinone and methyl/methylchloroisothiazolinone at a ratio of > 10:1. It is suited for VOC-free products.

It is important to note that the degradation of the chlorinated component does not result in the release of chlorine or chlorinated organic molecules leading to AOX into the environment.

Benefits of KORALONE C-309 Preservative

- The special ratio of these active substances results in both a rapid activity and a long term protection of the finished product against a broad spectrum of micro-organisms, including bacteria, yeast and mould fungi.
- The combination of the three ingredients allows to deliver a robust performance within a wide range of pH from 4 to 11.
- Stable up to 50°C (short period at 60°C). Higher temperature will have a detrimental impact on MCI component which is responsible for the initial booster effect. However BIT and MI components are very stable under high temperature and therefore long term protection should not be affected under drastic conditions.
- Readily incorporated in household product due to its liquid form.
- Compatible and effective with anionic, ester quaternary surfactants, non ionic surfactants and commonly used household product ingredients.

KORALONE C-309

Formulation and Properties

These properties are typical but do not constitute specifications.

Chemical Composition

Total Active Ingredients	9.4%
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5-chloro-2-methyl-4-isothiazolin-3-one (MCI)	
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2-methyl-4-isothiazolin-3-one (MI)	
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1.2-benzisothiazolin-3-one (BIT)	
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Inert Ingredients

Glycol	
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Water	
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Physical Properties	
Appearance	Green, clear liquid
Odor	Mild
Flash Point	>100°C
Density $d^{20/4}$	1.15 g/l ^{+/-0.01}
Refractive Index $n^{20/D}$	1.465 ^{+/-0.005}
Viscosity η 20°C	<20mPa.s
Solubility in water	Miscible
pH	3-6

Suggested Applications

- **Laundry products**, such as:
 - liquid laundry detergents
 - fabric softeners
 - pre-spotters
- **Liquid detergents**, such as:
 - hand dishwashing detergents
 - hand cleaners
 - hand soaps
- **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.

Recommended Use Levels

For effective preservation of domestic products it is recommended that KORALONE C-309 preservative should be dosed in the range of 0.15% to 0.35% as supplied.

The typical use concentration of KORALONE C-309 is around 0.20% and allows the long term protection of the finished product without additional labelling requirements.

Since the components of household formulations can vary considerably and may have an impact on the effect of preservatives, we advise each manufacturer to confirm the efficacy and stability of KORALONE C-309 preservative in use.

Safe Handling of KORALONE C-309

Please refer to the safety data sheet (MSDS) of this product for precise handling instructions. The processing and use of industrial chemicals require 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.

The legal requirements prevailing in your country, especially on working hygiene and in the avoidance of accidents, must be observed.

Shelf Life

KORALONE C-309 in original containers under appropriate storage conditions will have a shelf life of 12 months.

Storage

KORALONE C-309 should be stored in closed original containers at ambient temperature protected from direct heat.

Regulatory Information

For regulatory information about KORALONE C-309 preservative, please ask your local Rohm and Haas contact or liaise with our Product Integrity Department. KORALONE C-309 is formulated with BPD (Biocidal Products Directive) notified active ingredients.

Material Safety Data Sheets

Rohm and Haas Material Safety Data Sheets (MSDS) contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Under the principles of Product Stewardship and some government regulations (for example, the US OSHA Hazard Communication Standard), workers must have access to and understand MSDS on all hazardous substances to which they are exposed. Thus, it is important that you provide appropriate training and information to your employees and make sure they have available to them MSDS on any hazardous products in the workplace.

Upon initial shipment of all products (including samples), Rohm and Haas Company sends the appropriate MSDS to the recipient. If you do not have access to one of these MSDS, please contact your local Rohm and Haas representative for a copy. Updated MSDS are sent upon revision to all customers of record. Rohm and Haas Company is a member of the American Chemistry Council (ACC) and is committed to the ACC's Responsible Care Program.

Use biocides safely. Always read the label and product information before use.

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These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control.

We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.

Suggestions for uses of our products or the inclusion of descriptive material from patents and the citation of specific patents in this publication should not be understood as recommending the use of our products in violation of any patent or as permission or license to use any patents of the Rohm and Haas Company.

For further details, please contact your local Account Manager or local Business Representative.

