



VINKOCIDE™ CMI 14

-Broad spectrum preservative-

VINKOCIDE™ CMI 14 is a formulation of **5-Chloro-2-methyl-2H-isothiazol-3-one (CIT)** with **2-Methyl-2H-isothiazol-3-one (MIT)**.

VINKOCIDE™ CMI 14 is a biocide to be used as a preservative for technical applications like paints, adhesives, household and industrial cleaning products. It is not intended for use in agricultural applications.

- ▶ ideal for use in aqueous and water miscible systems
- ▶ broad antimicrobial spectrum against bacteria, fungi and yeasts
- ▶ often effective where other preservatives fail
- ▶ free from formaldehyde, formaldehyde releasers, phenolics or heavy metals
- ▶ good chemical stability
- ▶ non-volatile
- ▶ excellent long-term efficacy
- ▶ belongs to the best evaluated broad spectrum biocides

VINKOCIDE™ CMI 14 meets the highest purity standards. Impurities are often the cause of undesired side effects in terms of toxicological or technical properties. Also the efficacy can be influenced by impurities. These are reduced to a minimum in **VINKOCIDE™ CMI 14**.

VINKOCIDE™ CMI 14 penetrates the cells of microorganisms, reacts with vital parts of the cell and inactivates important substrates and enzymes necessary to normal cell function. These relatively unspecific reactions prevent the development of microbial adaptation.

VINKOCIDE™ CMI 14 prevents microbial deterioration of products and the resulting effects such as:

- phase separation
- odor build up
- gas build up
- changes in viscosity
- build up of health threatening toxins



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Applications:

Under certain physico-chemical conditions the stability of CIT/MIT can be limited. Therefore we recommend testing the compatibility in individual formulations. For special formulations it can be desirable to combine **VINKOCIDE™ CMI 14** with further biocides. Depending on the individual demands **VINKOCIDE™ CMI 14** can be combined with most commonly used biocides.

Under normal use patterns concentrations (w/w) of 0,01 – 0,025 % are sufficient in most applications. It can be used in a pH range of 3-8,5. Temperatures > 40 – 50 °C should be avoided.

Minimum inhibition concentrations of the active ingredient:

		MIC / ppm
Bacteria	Bacillus subtilis	9
	Enterobacter aerogenes	9
	Escherischia coli	9
	Klebsiella pneumoniae	9
	Proteus vulgaris	9
	Pseudomonas aeruginosa	9
	Pseudomonas cepacia	9
	Salmonella cholerasuis (typhi)	9
	Staphylococcus aureus	11,5
Fungi, yeasts	Aspergillus niger	9
	Aspergillus oryzae	11,5
	Chaetomium globosum	9
	Penicillium funiculosum	11,5
	Pullularia pullulans	2,3
	Candida albicans	9
	Saccharomyces cerevisiae	9

VINKOCIDE™ CMI 14 is used for technical applications. For better dosing pre-dilutions can be made. Such pre-dilutions should not be stored for a long time.



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Recommended Applications:

In can preservation:

- Dispersion paints
- Dispersion plasters
- Polymer dispersions
- Adhesives, glues
- Sealants
- Kaolin-, chalk-, starch-Slurries
- Pigment-Slurries
- Household and cleaning products
- Wax emulsions
- Building materials
- concrete additives
- Metal working fluids
- Cooling water
- Water bed fluids
- Slimicides
- Cellulose and paper production
- Flotation
- Oil Field applications
- Leather and textile
- Fountain solutions

Regulations:

EU: For the active ingredients the transitory periods of the biocidal products directive 98/8/EC are valid. A product dossier will be done under the biocidal products regulation. Intended applications: PT 2, 6, 11, 12, 13

Meets the requirements of
European Flower 2009/544/EC (indoor paints and varnishes)
2009/543/EG (outdoor paints and varnishes)

EU-national : please ask us

Germany: BauA: N-38780
Meets BfR XIV. (Plastics Dispersions)
Meets BfR XXXVI. (Paper and board for food contact)
Meets RAL UZ 102 (low emission paints)
Meets RAL UZ 12a (low emission varnishes)
WGK: 3



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Australia:	The active ingredients are listed in the inventory of chemical substances AICS
China:	The active ingredients are listed in the inventory of chemical substances IECSC
Japan:	The active ingredients are listed in the inventory of chemical substances ENCS
Korea:	The active ingredients are listed in the inventory of chemical substances KECI
Philippinen:	The active ingredients are listed in the inventory of chemical substances PICCS
USA:	meets FDA 21 CFR 175.105 (adhesives with food contact) 176.170 (components of paper and paperboard in contact with Aqueous and fatty food) 176.180 (components of paper and paperboard in contact with dry food) 176.300 (paper slimicides)
Venezuela:	applied for registration

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

Our recommendations regarding our products are given in good faith, but imply no corresponding liability. Our Conditions of Sales and Supply apply in all other respects.