

ACTICIDE[®] MV 14

Product Information



ACTICIDE[®] MV 14 is a VOC-free, monovalent stabilised, concentrated, isothiazolinone based biocide for the wet state preservation of formaldehyde and bivalent metal ion sensitive formulations, for industrial water treatment and for the production of preservative products.

Chemical and Physical Characteristics

Composition:	A concentrated formulation of 5-chloro-2-methyl-4-isothiazolin-3-one (CIT) and 2-methyl-4-isothiazolin-3-one (MIT)	
Appearance:	Colourless to yellow liquid	
Odour:	Mild	
Refractive Index (20°C):	1.3950 –	1.4050
Density (20°C):	1.200 –	1.260 g/ml
pH (20°C):	2.5 –	3.0
MIT:	3.40 –	3.60%
CIT:	10.50 –	10.70%
Colour (Gardner):	Max. 4.0	
DC:	< 100 ppm	
Solubility:	Fully soluble in water and most lower alcohols and glycols	
Stability in application*:	Stable over the pH range 2 - 9 and up to 60°C	

Note: These characteristics do not constitute a sales specification

Biocidal Properties

ACTICIDE[®] MV 14 has a very broad activity spectrum against bacteria, moulds and yeasts.

Test Organisms		
Bacteria	Moulds	Yeasts
<i>Corynebacterium sp.</i> <i>Escherichia coli</i> <i>Klebsiella sp.</i> <i>Proteus penneri</i> <i>Pseudomonas aeruginosa</i>	<i>Aspergillus niger</i> <i>Penicillium funiculosum</i>	<i>Saccharomyces cerevisiae</i>

Applications / Use Levels

ACTICIDE[®] MV 14 is suitable for the wet state preservation of a wide range of aqueous products including paints, polymer emulsions, adhesives, ceramic glazes, fillers and sealants, as a tankside additive for ready-diluted metalworking fluids, for industrial water treatment, including cooling systems and papermaking and for the production of preservative formulations.

Normal use concentrations are in the range 0.005 - 0.025%, depending on the product to be protected and the environmental conditions to which it will be exposed. The precise level required by a specific formulation can be determined by the local **Thor Microbiological Technical Centre**.

Addition / Compatibility

ACTICIDE® MV 14 can be added at any time during production. However, it is advised to incorporate it as early as possible to give protection throughout the production process. Care should be taken to ensure that temperature, pH and redox potential at the point of addition are suitable for stability of the product. Avoid alkalis, reducing agents, strong oxidising agents and nucleophiles.

Prior to use **ACTICIDE® MV 14** must not be diluted or mixed with any other raw material to avoid negative influences on the actives. Please contact our **Thor Microbiological Technical Centre** for further information.

ACTICIDE® MV 14 is compatible with most formulations in which its application is recommended. It is particularly suitable for products in which biocides stabilised with bivalent ions such as Mg^{2+} and Cu^{2+} may be incompatible. Reducing agents, amines and other strong nucleophiles can cause degradation of the active ingredients. Users are therefore advised to carry out their own tests or seek further advice from **Thor** prior to initial application.

Packaging / Storage / Regulatory Approvals

Packaging:	Plastic drums: 25 kg / 200 kg, IBC: 1,000 kg
Availability:	Ex stock in the above packaging
Shelf Life:	18 months from production date when stored at approximately 20°C
Storage:	Store only in the original container. The product, as supplied, naturally and very slowly involves carbon dioxide gas. In order to prevent spillages, always ensure that these containers are stored and transported in upright position. Keep containers tightly sealed. Prevent release to the environment by adequate secondary containment and use of appropriate spill control procedures. Recommended storage temperature: 10 – 30°C. Protect from heat and direct sunlight.
Regulatory Approvals:	The active substances of ACTICIDE® MV 14 have BfR chapters 14 and 36, FDA 21 CFRs 175.105, 176.170, 176.180 and 176.300 and a wide range of other regulatory approvals.

Safety / Labelling / Toxicology

For detailed information on the toxicology and handling of **ACTICIDE® MV 14** and advice on the labelling of products in which it may be used, please refer to the separate Safety Data Sheet or seek specific advice from **Thor**.

* The data given are time and system dependant.

The information contained in this leaflet is intended to be of assistance to users but is without guarantee. Variations can occur in application and users are advised to conduct their own tests. Suggestions for use neither give nor imply any freedom from patent infringement.

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

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General changes of the document in 2014 are included in the new revision.