

ACTICIDE[®] 14

Product Information



ACTICIDE[®] 14 is a VOC-free, concentrated, isothiazolinone based biocide for the wet state preservation of formaldehyde 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 pale yellow liquid
Odour:	Characteristic
Density (20°C):	1.230 - 1.260 g/ml
pH (20°C):	2.5 - 3.0
MIT:	3.40 - 3.60 %
CIT:	10.50 - 10.70 %
Total Active:	13.90 - 14.30 %
Colour (Gardner):	Max. 4.0
DC:	< 100 ppm
Mg-chloride:	4.0 - 8.0 %
Mg-nitrate:	14.0 - 18.0 %
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[®] 14 has a very broad spectrum of activity against bacteria, moulds and yeasts including the following typical spoilage organisms.

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>Aureobasidium pullulans</i> <i>Penicillium funiculosum</i> <i>Trichoderma viride</i>	<i>Saccharomyces cerevisiae</i>

Applications / Use Levels

ACTICIDE[®] 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. It may be used 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 including those for the prevention of surface mould growth on timber, applied by vacuum impregnation.

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® 14 can be added at any time of production but care should be taken to ensure that external factors have no negative impact on stability of the actives.

ACTICIDE® 14 exhibits no compatibility problems in most practical applications. However, due to the large range of possible applications, it is recommended that the stability of the active ingredients, system compatibility and any influences on the product properties during production, storage, transport and in the application are tested prior to use. The use of oxidising, reducing agents and nucleophiles which may adversely affect active ingredient stability should be avoided. Care should be taken to ensure that temperature, pH and redox potential at the point of addition are suitable for stability of the product.

It is generally recommended to routinely test for changes in chemical and physical properties such as discolouration (colour stability), viscosity and odour, for each individual matrix system, as well as the effects of external factors such as pH, moisture, temperature and UV light.

Prior to use, **ACTICIDE® 14** must not be diluted or mixed with other raw materials which could adversely affect the performance of the active agent. Please contact your local **Thor Microbiological Technical Centre** for further information.

Packaging / Storage / Regulatory Approvals

Packaging:	Plastic lined steel drums: 30 kg / 200 kg, Container: 1,000 kg
Availability:	Ex stock in the above packaging
Shelf Life:	18 months from production date
Storage:	It is preferable to handle the product in a closed system. Store only in the original container. Recommended storage temperature: 10 - 30°C. Prevent release to the environment by adequate secondary containment and use of appropriate spill control procedures.
Regulatory Approvals:	Detailed information available in the regulatory status document.

Safety / Labelling / Toxicology

For detailed information on the toxicology and handling of **ACTICIDE® 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.