

MIRECIDE - KW/600.X

BIOCIDES FOR WATER-BASED PAINTS MANUFACTURING

PROPERTIES

MIRECIDE-KW/600.X is a preservative based on stabilised isothiazolones in aqueous media, highly effective against gram-positive and gram-negative bacteria, fungi and yeasts, used as a preservative for paints, glues and all kind of water-based emulsions. It prevents as well, at very low doses, from alterations of odour, viscosity, pH, caused by micro-organisms in water-based paints and water-based emulsions.

It is suitable for the preservative treatment in paints with ecologic label at low using dosage of 0,1%.

REGULATIONS

The active chemical of **MIRECIDE-KW/600.X** is licensed for these purposes under Food and Drug Administration (FDA), Code of Federal Regulations sections 175.105, 175.300, 175.320 and 176.170. It is also approved by the German Recommendations of BgvV (*Empfehlungen*) chapters XIV 2 f), XXXVI, B VII b), 12.a) and XXXVI/2, G b), 8.a).

INSTRUCTIONS FOR USE AND RECOMMENDED DOSES

Depending on the special characteristics of every case, doses ranging from 0,05 to 0,3% over total amount of the product to be treated, are usually recommended. **MIRECIDE-KW/600.X** must be added to the water of manufacture or at a moment when it is possible to obtain an even distribution within the product to be preserved. Nevertheless, it is recommended to carry out before the first industrial manufacture, essays in the laboratory with the additive in order to select the optimal dose, as well, as to verify the good compatibility in the media to treat .

PRODUCT DATA

Appearance	:	Transparent liquid.
Colour (Gardner)	:	5 maximum.
Density (20 ⁰ C)	:	1,02 - 1,07 gr/cc (ASTM-D/891-59.C)
Viscosity (20 ⁰ C)	:	Below 100 cPs (Brookfield RVsp1, 100 rpm) (ASTM-D/1084 Meth.B)
pH (20 ⁰ C)	:	2 – 4

Refractive index (20°C)	:	1,33 - 1,37 (UNE 55015)
Freezing point	:	Lower than -5°C
Boiling point	:	Around 98°C
Flash point	:	Greater than boiling point value.
Solubility	:	Soluble in water and glycols.
CMI/MI ratio	:	2,9 - 3,3
VOC	:	Free

MICROBIOLOGICAL ACTIVITY

The minimum inhibitory concentration data (m.i.c.) of **MIRECIDE-KW/600.X** against different bacteria and fungi strains (essays in laboratory) are showed below

<u>Microorganism</u>	<u>M.I.C.</u> (ppm)
<i>Staphylococcus aureus</i>	256
<i>Bacillus megaterium</i>	256
<i>Citrobacter intermedium</i>	171
<i>Enterobacter aerogenes</i>	171
<i>Pseudomona aeruginosa</i>	128
<i>Aspergillus niger</i>	50
<i>Penicillium caseicollum</i>	2,5
<i>Aureobasidium pullulans</i>	5

END-PRODUCTS LABELLING

Concerning this additive, danger labelling is not required for the products treated with it at a concentration below 0,1% according to the current Directives on labelling. From 0,1% to below 4% the products must be labelled with the symbol and phrase Xi: R43 (may cause sensitisation by skin contact). From 4% to 5% Xi: R36/38-43 (R36/36, irritating to eyes and skin).

HANDLING AND STORAGE

Industrial product. It is recommended to handle **MIRECIDE-KW/600.X** under the safe indications contained in the safety data sheet of the product.

Incompatible substances regarding the chemistry of the product are mainly the oxidizing and reducing agents, mercaptanes (thio-alcohols) and amines. Although **MIRECIDE-KW/600.X** presents universal compatibility with anionic, cationic and non-ionic surface active and emulsion agents, previous compatibility tests in laboratory are recommended.

MIRECIDE-KW/600.X is stable at least for 1 year in storage temperatures above -5°C and below 35°C. During this period turbidity, decrease of pH value or a slight precipitation may occur, but it does not affect the activity of the product.