

Product Fact Sheet



JMAC™ S 10

Antimicrobial active

COMPOSITION

Silver chloride antimicrobial agent and titanium dioxide

PRODUCT PROPERTIES*)

Silver chloride content	About 2%
Appearance at 25 °C	White, solid powder
Loss on drying (30 minutes at 130°C)	Max. 2%

*) These characteristics are for guidance only and are not to be taken as product specifications. The tolerances are given in the product specification sheet. For further information on product properties, toxicological, ecological and safety data, please refer to the safety data sheet.

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USE

JMAC™ S 10 is used as antimicrobial agent with low toxicity in non aqueous based applications. Following are some examples:

- Hot melt plastics injection moldings
- Extruded PVC
- Powder based grouts and tile adhesives
- Alkyd coatings
- Powder coatings and master batches

JMAC™ S 10 is used in a wide pH range of 3 – 12 and is stable to temperatures of up to 300°C without losing antimicrobial effectiveness.

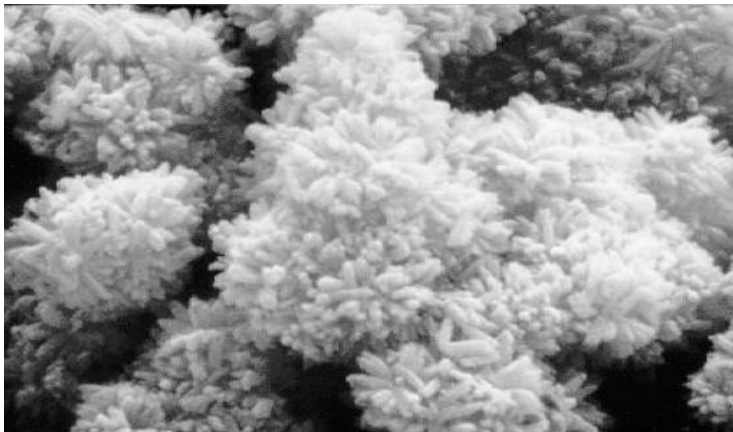
The effective dosage should be tested in appropriate challenge tests prior to use. Typical dose levels in solid formulations are 0,05 – 1,0% JMAC™ S 10.

MECHANISM OF ACTION

When JMAC™ S 10 particles are exposed to aqueous media, a saturated solution of silver chloride is formed around the titanium dioxide particles. Silver ions diffuse from the particles to the aqueous phase and form an equilibrium concentration. Silver ions react destructively within microbial cells by interruption of cell membrane, enzyme inhibition and interrupting DNA.

JMAC™ ACTIVE

Electron microscopy of silver chloride on titanium dioxide particles



MICROBIAL DATA

JMAC™ S 10 has a broad spectrum of activity which is demonstrated by the following MIC data.

MIC Levels	Organism	MIC (ppm)
	Bacteria	
	Pseudomonas aeruginosa	200
	Pseudomonas fluorescens	200
	Pseudomonas olovorans	200
	Citrobacter freundii	200
	Proteus vulgaris	200
	Escherichia coli	100
	Staphylococcus aureus	100



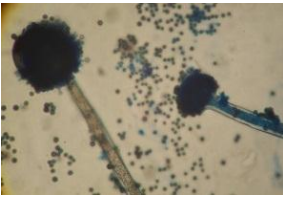
CHEMICAL COMPATIBILITY AND STABILITY IN FORMULATIONS

JMAC™ S 10 is compatible with most raw materials used in the manufacture of industrial products. At normal use levels JMAC™ S 10 should not cause color problems. Care, however, should be taken to check color stability of products when using JMAC™ S 10. JMAC™ S 10 can react with redox agents reducing to metallic silver. This can give rise to rapid formation of blue-grey-pink color. Compatibility should always be checked and evaluated before use.

HANDLING AND STORAGE

Protect from exposure to humidity. Biocidal products should ideally be stored between + 5 and max.+ 40°C.

Use biocides safely. Always read the label and product information before use. Any usage shall comply with the Biocides Product Regulations 2012-538-EC.



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