No-Tox AM® COATINGS AND INKS

Frequently Asked Questions

NS24
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Q. Can No-Tox AM coatings be applied to the food product or only the package?

A. The No-Tox AM coatings can be applied only to the package. The No-Tox AM coatings are FDA compliant for direct food contact but do not have direct food additive status, so they cannot be applied to the food itself.

Q. Will the use of No-Tox AM products extend the shelf life of food products?

A. At this time, we cannot answer this question. We have seen conflicting results. Shelf life extension depends on the configuration of the package itself and the humidity moisture available.

Q. Can silver be used as a direct food additive?

A. No, it is not approved as a direct food additive at this time.

Q. How long can I expect the silver zeolite to have antimicrobial properties on the substrate surface?

A. At this time, we have data that shows our No-Tox AM products are effective a minimum of twelve months, but, in all likelihood, the silver zeolite should be effective for the life of the package.

Q. Is there a zone of bacterial inhibition outside direct contact with the No-Tox AM coating?

A. We do not have any evidence that there is a zone of bacterial inhibition outside the direct contact area of No-Tox AM coatings. However, several of our customers are engaged in tests to determine if there is such a "zone". The question of this bacterial inhibition zone is due to the fact that the silver ions in No-Tox AM coatings may extend out under high humidity conditions along the substrate surface.

Q. Will the Silver Zeolite, in contact with meat and its amino acids, be effective?

A. As meats contain natural products that scavenge metal ions, it is believed that the amount of silver ions available to destroy microbes in a meat package coating could be reduced. As a result, it is recommended that a higher No-Tox AM coating weight be used to increase the amount of silver ion delivered to the specific microbe.

Q. What is the ideal application thickness for No-Tox AM products?

A. Tests conducted to date suggest that a coating thickness of 4-5 microns provides good antimicrobial properties. The No-Tox AM coatings should be applied at approximately 0.5-1.0 grams/meters^2 on a dry basis.

Q. What QA method can an end-user employ to guarantee equal distribution of the silver zeolite on the packaging surface?

A. Off-Line – a microscope can be used to view the silver zeolite particles that are a few microns in diameter. Silver zeolite is also fluorescent and the coating can be made visible using an UV lamp against a dark background.

Q. Will headspace moisture activate the silver zeolite?

A. Silver zeolite in No-Tox AM coatings will be activated as moisture condenses on the surface, but it is not volatile.

Q. Do No-Tox AM coatings' effectiveness have any temperature limitations?

A. Since the effectiveness of No-Tox AM coatings depends on the ability of silver ion to move in moisture, freezing would reduce the silver ion mobility. Raising the surface temperature in the presence of moisture increases the silver ion mobility and the No-Tox AM antimicrobial potency.

Q. Can this product discolor or cause discoloration?

A. Silver ions can be reduced under certain conditions to produce free silver, silver oxides, or react with sulfur to form black or gray silver compounds. However, the level of silver is extremely small in our coatings so discoloration is not a factor in most applications for direct food contact.

Q. Has Colorcon tested No-Tox AM products against spore containing microbes?

A. No-Tox AM coatings have been tested by the CDC in Atlanta against Anthrax in both vegetative and spore form. No-Tox AM coatings were only effective against the vegetative form of Anthrax.

Q. Will the silver ion cause problems with metal machine parts – zinc, etc.?

A. Silver ion will interact with other metals if conditions permit. However, under normal press conditions, no unusual reactions have been noticed.

Q. How do you dispose of a coating containing silver zeolite?

A. No-Tox AM coating waste is handled in a manner similar to standard water-based and solvent- based inks and coatings. State and local waste disposal regulations should be followed.

Q. Can FDA documentation be obtained for FDA compliance of silver zeolite?

A. Yes, it can be found in the Federal Register.

Q. What is the EPA reference number for silver zeolite used in No-Tox AM products?

A. AJ10D-71227-1-72854

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No-Tox® Products

For more information, contact your Colorcon representative or call 1-800-724-0624
You can also visit our website at http:// www.colorcon.com/notox

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