



TECHNICAL UPDATE

October 1, 2002

## EDT Corp Response Regarding Anti-Microbial Agents

Anti-microbial agents in bearings, bearing housings, belting, cutting boards, knife handles, and other food processing accessories are being increasingly promoted in industry. They began to appear **several years ago** in the U.S. with a variety of consumer and industrial products. In the European Union, Microban® has been approved as a food contact additive in plastics. In the USA, it is registered for use in food contact surfaces, except in food packaging.

EDT Corp is keeping watch on the regulations by government agencies as well as the scientific debate about this kind of product. There is not full agreement about the benefit or harm that these anti-microbial agents can have either short- or long-term.

Regardless of how they are promoted, **anti-microbial agents are not designed to kill and do not kill** the harmful bacteria. While certainly some bacteria are killed in the process, the purpose of these agents is to **RETARD THE GROWTH** of the bacteria. While this certainly would seem to be a desirable feature, there is considerable evidence in the testing that has been done to date that the bacteria that are not killed are, in fact, more resistant to these agents and develop increased resistance. This creates a bigger problem than was had before the introduction of these agents. This is true of Microban® and all other antimicrobial agents on the market.

If 98% of bacteria coming in contact with any product were killed because of an anti-microbial additive, that would leave 2% that would quickly multiply and, in the subsequent generations, would not be affected by the agent at all. In these kinds of bacteria, the second generation could be generated quickly and food processing plants would be continually forced into new and advanced chemicals to keep up acceptable sanitation levels.

Surveys that have been conducted in both the consumer and industrial markets clearly indicate that

people believe that these agents kill the bacteria, and people have developed a false sense of security when using products advertised with this anti-microbial feature. It is unwise to operate under the assumption that anti-microbials prevent bacteria from occurring.

Anti-microbial agents are not expensive, and do not change the price of the products in any meaningful way, but they make for great advertising until the buyer fully understands the limitations of the products. Many companies have added these agents to their products with good intentions but have done so without a full understanding of the long-term implications of these actions. Products are too often advertised for their features, and the limitations are not explained. The retail or industrial customer is then forced to make a purchasing decision based on incomplete information that is based more on "marketing" than on the complete facts of the science.

In the future, EDT expects that there will be killing agents that can be added to products, but at this time we are not aware of any. To date, we have seen no documentation that will show anything but a small "kill" percentage and a large "growth retardant" percentage.

EDT maintains a file of anti-microbial agents that are on the market, but because of the uncertainty of the final testing results and with a high probability of long term problems, we have decided to wait until more testing has been done before we take steps to add these agents to our products. If positive new information comes available on this subject, and long term testing shows that chemical additives are beneficial in the fight against detrimental bacteria, you can be assured that EDT Corp will upgrade our products to include these agents. For now, we believe that to include these agents in our products would be a disservice to our customers.

Additional questions on this topic should be addressed to Carl Klinge, EDT Engineering Manager.