



# ANTIMICROBIAL PRODUCTS

Protective Solutions from RTP Company

## Quick Information

- ▶ Inhibits microbic growth and associated damage
- ▶ Customizable for color and other functional properties
- ▶ Multiple technologies to suit unique applications

Imagine a thermoplastic masterbatch or compound that protects against bacteria, fungi (mold and mildew), algae, and other microbes and minimizes discoloration, odor, and physical damage to materials. At RTP Company, we not only imagined it, we've made it a reality.

A wide variety of organic and inorganic antimicrobial solutions are available from RTP Company, including popular Biosafe® silane-based and silver-based grades. Our polymer experts can recommend the best microbe fighting technology that meets the requirements of your specific application.

Concerns over exposure to microbes on article surfaces has generated increased interest in antimicrobial additives. Unprotected plastics can be attacked by microbes, leading to unsightly discoloration, unpleasant odors, and polymer degradation issues.

Antimicrobial additives improve a wide range of plastic products by providing inherent microbe-fighting properties that control the spread of bacteria, fungi, and algae on the surface of treated products.

This results in longer product life-cycles and improved aesthetics.

Inorganic antimicrobials possess high heat stability and low volatility. They reduce the risk of microbe adaption and provide long-lasting effectiveness. Organic antimicrobials have processing temperature limitations and some can lead to microbes developing resistance.

Typical antimicrobial loading levels vary from 0.5-5.0%. Better efficacy is achieved at higher loadings, whereas lower loadings minimize cost. Almost all thermoplastic resin systems can benefit from some form of antimicrobial treatment and select grades are FDA compliant.

Typical applications that can benefit from antimicrobial treatment include medical devices, food processing and handling equipment, sporting goods, consumer appliances, textiles, or any application exposed to an outdoor environment.

Antimicrobial masterbatches and compounds from RTP Company... another innovation from the leader in specialty compounding.

# ANTIMICROBIAL

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## Case Study: Edge Protection™ Mouth Guards

**Challenge:** The Edge Sports division of Bite Tech, Inc. required an FDA compliant anti-microbial additive to inhibit the growth of bacteria in their line of Edge Protection™ mouth guards. However, additives initially selected caused unacceptable discoloration during molding.

**Solution:** RTP Company engineers sought another supplier of the antimicrobial additive and formulated another compound that was presented to Bite Tech, Inc. for approval.

Engineers at RTP Company also continued to work with the original additive supplier to solve the discoloration problem.

**Result:** Bill Cook, V.P. of Operations at Bite Tech, Inc., credited RTP Company engineers for providing quick solutions throughout development and was impressed when RTP Company was able to supply two qualified materials for the Edge Protection™ mouth guard.



## Regulatory Information

The inability to claim certain health benefits has limited the use of antimicrobial additives in some applications. Companies who manufacture and sell antimicrobial treated products should be aware of the EPA guidelines regarding the claims that can be made for marketing purposes:

**For more information:**

PR Notice 2000-1 "Applicability of the Treated Articles Exemption to Antimicrobial Pesticides"  
 • [www.epa.gov/PR\\_Notices/pr2000-1.pdf](http://www.epa.gov/PR_Notices/pr2000-1.pdf)

A Fact Sheet on "Consumer Products Treated with Pesticides"  
 • [www.epa.gov/pesticides/factsheets/treatart.htm](http://www.epa.gov/pesticides/factsheets/treatart.htm)

## Antimicrobial Masterbatch Products

Number	Description	Resin
MCX 122009	25% Silver-based	PP, PE
MCX 122656	25% Silver-based	ABS, SAN, ASA
MCX 120680	25% Silver-based	PS
MCX 122016	25% Silver-based	PC
MCX 122670	25% Silver-based	PA
MCX 125250	25% Silver-based	PMMA
MCX 122677	25% Silver-based	TPU

## Biosafe® Masterbatch Products

Number	Description	Resin
MCX 117672	10% Biosafe®	TPU
MCX 117693	10% Biosafe®	PEBA

## RTP Company: Your Global Compounder Of Custom Engineered Thermoplastics

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