

## “Permanence of antimicrobials is the perfect solution”

01 December 2015 | Interviews | By Rahul Koul Koul

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#### **Please explain the usage of masterbatches as antimicrobials? What are the kind of applications in this space?**

When plastics come in close contact with humans, livestock, or raw foods, they can accumulate harmful germs that spread diseases and infections. These microbes not only find a conducive host in plastic surfaces to multiply, they also can be rapidly transferred across humans and animals alike. The consequences of these transmissions can range from the spread of common flu to deadly epidemics such as MRSA.

In order to prohibit these germs from spreading, antimicrobial masterbatches are applied to plastic surfaces to guard them against germs such as bacteria, algae, fungus, and other microbes. An effective antimicrobial should be able to kill ~99 percent of all germs that come in its contact and disrupt their further growth.

Application of antimicrobials ranges from public health, transport, and sanitation to personal wellness.

#### **Are there any major customized applications of masterbatches in pharma/life sciences industry? If yes, please tell us about current trends.**

A hand sanitizer is a common antimicrobial that we come across in our daily lives. While it is handy, it is also one of the weakest types of antimicrobials available; this is because of its short shelf life after application.

Consider a hospital environment - it is germ rich and the possibility of an infection spreading is high. From door handles, public seats, to staircase railings, every touch can be a possible source of infection.

Any masterbatch employed to control this spread should ideally satisfy three primary parameters such as non-toxic i.e. it should be safe for human contact. It should be highly effective and strong mortality rate of 99 percent or higher. Any effective antimicrobial masterbatch should last as long as the product lasts.

Another avenue of contracting microbial infections is public transportation. Because antimicrobial treated products give a sense of safety and well-being, these can also be used widely and effectively in metros, buses, airplanes, railways, and other such mediums. Use of disinfectants is typically cumbersome, repetitive and in the long run, very expensive. In such a case, permanence of antimicrobials such as Bactisafe, is the perfect solution.

### **Are antimicrobials environmentally safe?**

While I cannot comment on all the antimicrobials made in the world, I can offer a peak into the one we make at Alok, Bactisafe.

Bactisafe antimicrobials are based on pure silver. Not so long ago, our elders ate their food in silver utensils as silver is the most potent & safe antimicrobial known to mankind. It is safe and non toxic unlike many other chemically derived additives, which while being very effective, have toxicity issues and un-researched effects of the human and animal bodies. Bactisafe is an FDA compliant product and is widely accepted as a benchmark of safety.