



## Antimicrobial Compliance Explanation

The antimicrobial element (from a Microban subsidiary) is compounded with base resin to make a masterbatch of highly concentrated antimicrobial agent in a resin binder. This masterbatch is mixed with the molding resin and pigment and put into the injection molding machine to make the parts. So, the antimicrobial agent is completely dispersed throughout the component. Only user accessible components plus the impeller are treated.

Sample parts are tested at the Microban subsidiary for effectiveness of the treatment. The methods of ISO 22196:2011 were used to quantitatively test the specimens for antibacterial activity.

*E. coli* and *S. aureus* are the two bacteria used for testing. By our requirements an "R" value of at least 0.3 was required (50% reduction over 24 hours) for both test bacteria. Masterbatch concentrations were adjusted upward if the tested R value was too small. In most components, the R value is much greater than 0.3.

Test data available upon request



5-inch tabletop



5-inch clip



Antimicrobial plastic construction



4-inch clip



Necklace

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## **ISO Standard for evaluating antimicrobial treated plastics.**

### **Measurement of antibacterial activity on plastics and other non-porous surfaces**

This standard was last reviewed and confirmed in 2021. Therefore, this version remains current.

#### **Abstract**

##### **Preview**

ISO 22196:2011 specifies a method of evaluating the antibacterial activity of antibacterial-treated plastics, and other non-porous, surfaces of products (including intermediate products).

It is not intended to be used to evaluate the effects and propagation of bacteria on non-porous surfaces without antibacterial treatments. ISO 846 describes tests to evaluate the effects and propagation of bacteria on non-porous surfaces, which are different from those covered by ISO 22196.

Secondary effects of antibacterial treatments, such as the prevention of biodeterioration and odor, are not covered by the standard, which is not intended to be used or referenced as a method to document or claim biodegradability of, for instance, plastics materials.

Building materials are excluded, except where they are used in the same manner as treated articles.

Antibacterial-treated textile products are excluded, even if the surfaces are coated or laminated (such products are covered by ISO 20743).

Photocatalytic materials and products are excluded (such materials and products are covered by ISO 27447).

#### **General information**

Technical Committee : [ISO/TC 61/SC 6](#) Ageing, chemical and environmental resistance

ICS : [83.080.01](#) Plastics in general