How to Select the Right Dosage for Antibacterial M

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Category: antibacterial-materials

Selecting an appropriate dosage is the first step to balancing antibacterial performance, cos t and mechanical properties in plastic products.

Why Dosage Matters

Antibacterial masterbatch delivers its function through the active agent dispersed in the pol ymer matrix. Too low a dosage may not reach the target reduction rate, while an excessive d osage can affect colour, odour and mechanical performance. Selecting the right dosage is t herefore a balance between efficacy and cost.

Key Factors to Consider

The required dosage depends on the base resin, the wall thickness of the final part, the exp ected service life and the testing standard applied. Thin-walled parts generally need a highe r loading to keep the surface concentration above the inhibition threshold, whereas thick se ctions may reach the same effect with a lower addition.

Practical Advice

We recommend starting with a small pilot trial, preparing several loading levels and evaluat ing them with a consistent test method. Recording processing parameters alongside the res ults helps to distinguish material effects from process effects, and provides a reliable basis f or scaling up to mass production.