Quality Control of Additive Dispersion in Polymer C

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Dispersion quality directly influences appearance, mechanical performance and functional consistency of compounded plastics.

What Dispersion Means

Dispersion describes how evenly an additive is distributed within the polymer matrix. Poor dispersion creates local concentrations and weak points, which can show up as surface defe cts or inconsistent functional performance.

Common Evaluation Methods

Microscopy, filtration pressure testing and colour uniformity checks are frequently used to a ssess dispersion. Each method reveals a different aspect, so combining them gives a fuller p icture of the compounding quality.

Process Influences

Screw design, temperature profile and feeding accuracy all affect dispersion. Keeping raw materials dry and maintaining stable throughput help to reduce variability, while periodic s ampling provides early warning of drift before it reaches the customer.