

MATICS 

Material Management: Controlling Consumption in Plastic Manufacturing



Material management in factories has long been an inefficient and costly process. On average, manufacturers spend 50-60% of their sales turnover on purchasing various materials ("Materials & Finance Management", C.M. Sadiwala). The overuse of materials can be constantly found in any factory setting, from too much color additive in the production of plastic products to overweight. A simple overuse of raw ingredients can ultimately lead to a significant percentage of money lost. To get the most value out of manufacturing materials, there must be a more effective process.

What is Recipe Management?

A recipe, on its own, is the combined set of instructions and exact quantities of raw materials that are needed to make a product as it is designed. When combined with a smart shop floor control software, a Recipe Management System becomes a mandatory element in process managing and a stepping stone towards proficiently operating machines. Implementing and utilizing a Recipe Management tool, like the one that Matics offers, can store and download recipes, quantify data, and offer real-time insights, permitting manufacturers to manage the intricate processes that come with production recipes.

How Recipe Management Can Control the Use of Materials in Plastics

With the correct material management tools, manufacturers can take control of material flow in the factory and decrease overall waste during production. Let's take a look at the following example: A factory decides to switch its raw materials' supplier and must adjust the recipe for the new version of color additive. Through Matics, the recipe can be easily modified and updated on the system, alerting all the relevant staff of the adjustment and avoiding any problems on the factory floor.



Enhancing Quality and Preventing Dosing Systems Issues

The process of adding color to plastics requires extreme precision to maintain uniformity throughout an entire batch. If the amount of pigment deviates even slightly from your initial baseline, you could end up with a large chunk of the batch that looks significantly different from the rest. Manufacturers have no choice but to discard the outliers when this happens, resulting in a tremendous amount of waste.

Some facilities use automated color controllers that largely solve this problem. Matics material management capabilities are still important in this case: you can connect Matics to the dosing system and download the recipe digitally into it, preventing any human errors. If your color controller malfunctions, becomes disconnected, was set up wrong, or develops a blockage inside the dispensing mechanism, the Matics software will alert you of this problem immediately. You can then pause production briefly, correct the issue, and resume operations with the proper parameters back in place.



Real-Time Monitoring and Cutting Down Expensive Consumption of Raw Materials

Matics' real-time production management software has the power to control the exact usage and cost of materials. With each cycle, the precise measurements and ingredients are kept in the system for reference. The sophisticated recipe management system that Matics provides means having all historical data available, with statistics and recommendations per product, per job, per machine, per mold etc., so you can see what combination produced the best results with minimal rejects in each case. This way you can fine-tune your settings and ensure that you're always using the most optimized recipe.

By constantly monitoring in real-time the actual outcome versus the recipe, Matics can prevent an excessive use of expensive raw materials. If for some reason there's a discrepancy in the process, and the system identifies that instead of 2% of color additives, 4% was actually used,

real-time alerts can immediately notify shop floor employees, creating a new level of production efficiency and avoiding costly deviations.

Though on a micro scale, the difference may not seem significant, nor seen with the human eye, the accumulated cost of material is extreme as color is the most expensive raw material in the production process. Since even 1% of savings in purchasing results in roughly 5% profit, factories can now relish in avoiding the overuse of raw materials and loss of capital due to inconsistency in manufacturing.

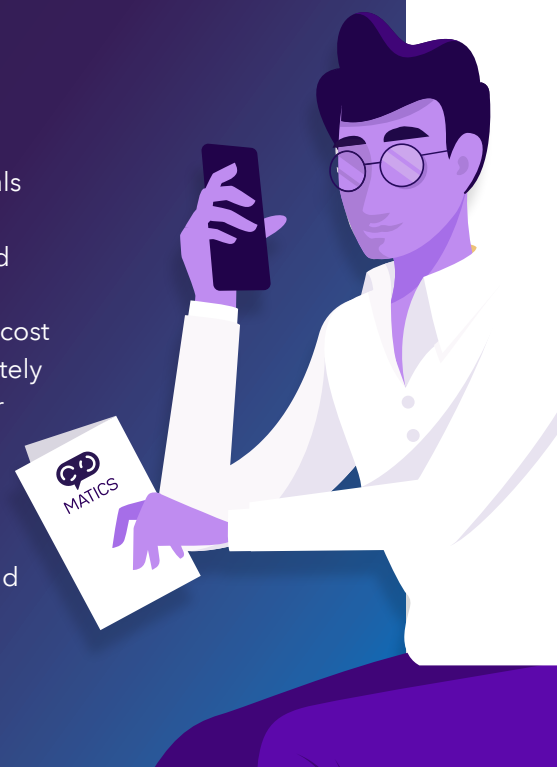
For manufacturers who often switch between different mold, machines, or suppliers, having the history of execution with each variation, and monitoring both the recipes and the outcome in real-time is crucial.



Adopting Matics as a Solution towards Effective Material Management

On top of the above mentioned benefits, Matics' smart, digital manufacturing platform is essential in dealing with bills of materials or cost estimation. When navigating production in real-time, manufacturers are able to see the difference between the planned consumption of raw materials with the actual production. These insights give you concrete numbers that properly account for the cost of materials during production, which you can then record accurately on your bill of materials and factor into your pricing and customer quotes, including the setup / rejects / production quantities.

Because these prices are based on real data instead of guesswork, they are not likely to need much adjustment during production, so you can manage your raw materials stock levels and have greater control of your bottom line.



The consequences of material waste have a direct impact on your facility's bottom line; therefore, reducing production waste is in every facility's best interest. Materials management tools give you the information you need to use your materials more efficiently and trim your budget accordingly.

[Matics' shop floor control software](#) includes manufacturing materials management functions that can help you with all of the problems mentioned above and more. [Contact us](#) today to learn more about our comprehensive [digital manufacturing management solution](#) and how it can help tackle the problem of waste in your facility.

Join our customers in digital manufacturing revolution



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