

Karsten Schulz

报告人简介:

2003 年开始在 Omya 担任市场和业务开发经理，并从 2017 年开始担任全球大客户经理包装。主要目标是在 PE, PP, PS 和生物聚合物应用中开发碳酸钙。总部位于 Oftringen 的瑞士总公司。



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Profile of the Author:

Started 2003 in Omya as Market and Business Development Manager and since 2017 Global Key Account Manager Packaging. Main objective is to develop calcium carbonate in PE, PP, PS and biopolymer applications. Based in the Swiss Head Quarter in Oftringen.

用功能化碳酸钙提高聚乳酸的性能

摘要: Omya 开发了 Smartfill 技术平台，以提高聚碳酸酯，特别是聚乳酸中碳酸钙的性能。

在聚烯烃和聚苯乙烯中，碳酸钙的使用是众所周知的，加入率高达 40% 是很常见的。然而，在 PLA 的情况下，使用常规的碳酸钙产品由于加工过程中的水解而导致产品性能差。因此，PLA 或富含 PLA 的化合物中高含量的碳酸钙不可行或不利。随着 OmyaSmartfill® 技术的发展，情况发生了变化。专为 PLA 应用开发的 OmyaSmartfill® 等产品在高负荷下加工时几乎不会发生水解。同时，添加 OmyaSmartfill® 可提高产品刚度，抗冲击性，伸长率，传热性，并有助于整体降低配方成本。

Boosting the Performance of Polylactic Acid with Functionalized Calcium Carbonate

Abstract: Omya developed the Smartfill technology platform to improve the performance of Calcium Carbonate in polyesters and especially in Polylactic Acid.

In Polyolefins and Polystyrene, the use of Calcium Carbonate is well known and addition rates of up to 40% are quite common. However, in the case of PLA, using conventional Calcium Carbonate products has led to poor product performance as a result of hydrolysis during processing. For this reason, high loadings of Calcium Carbonate in PLA or PLA rich compounds have not been feasible or beneficial. With the development of Omya Smartfill® technology the situation has changed. Products like Omya Smartfill® developed specifically for PLA applications demonstrate almost no hydrolysis when processed at high loading. At the same time, the addition of Omya Smartfill® improves product stiffness, impact resistance, elongation, heat transfer, and it contributes to an overall reduction in formulation cost.