



CASE STUDY /

Ansys + Kärcher

“Ansys Granta MI enables us to keep track of a “more-than-1.5-million-piece puzzle” by storing literally any material-related information we have. From generic supplier information down to our own measurement’s single data points: Everything’s easily accessible, interconnected and analyzable.”

Daniel Carmine Manocchio

Manager Material Technology / Kärcher

Kärcher Ensures Material Consistency with Ansys Granta MI

Accurate information about materials is part of the foundation for high-quality, reliable products. But with naming conventions between different suppliers often inconsistent or incomplete, finding and maintaining accurate materials data is difficult. Kärcher approves and purchases polymers from more than 100 materials suppliers, used in making 3,000 products, so validating and managing materials properties data can be a convoluted and unwieldy process.

/ Challenges

Despite the polymer industry's standardization efforts, similarly named grades from multiple polymer suppliers can have significantly different material properties. Mixing up different grades can create costly and time-consuming disruptions to the development process, including requiring additional testing. Yet without those tests, it becomes impossible to specify exact grades on R&D drawings, ensure that parts and products meet ISO and other standards, and comply with regulations.

/ Technology Used

- Ansys Granta MI

/ Engineering Solution

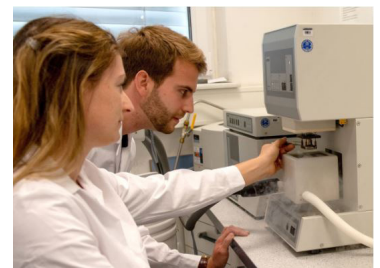
- Beginning with 1.5 million data points, Kärcher's materials engineers used Granta MI to build comprehensive records about every polymer grade the company buys for 20 facilities worldwide.
- This was afterwards extended by almost 20 years of legacy data from mechanical, physical and chemical material tests and linked to the corresponding polymer grades.
- Then, Granta MI was connected to the Jira system used as their material examination ordering system, fully digitalizing the whole process from ordering up to report archiving.

/ Benefits

- In general, better materials intelligence has made Kärcher more agile, further solidifying its market position.
- Kärcher personnel can compare and substitute materials more efficiently while reducing unnecessary or superfluous testing, as all tests on a given material are visible at a glance.
- By storing the color measurements for color chips, test samples and final parts in the test records, then feeding that information into the material records, Kärcher teams can quickly determine if a color is matched correctly or not, and avoid winding up with 50 shades of yellow.

/ Company Description

A family-owned company, Kärcher is the world's leading provider of efficient, resource-conserving cleaning systems. Kärcher makes a difference through top performance, innovation and quality. The company's cleaning equipment combines functionality, user-friendliness and sophisticated design. Kärcher currently holds more than 600 patents and utility models — a true testament to the company's ingenuity and innovative prowess.



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