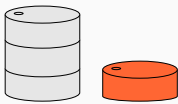


CASE STUDY - FRICTION

Advanced water-based release agent helps brake pad manufacturer reduce more than buildup.

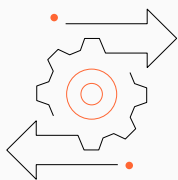
60%
REDUCTION IN
AMOUNT OF
RELEASE AGENT
USED



LESS
BUILDUP ON
THE MOLD



EXTENDED
SERVICE
LIFE TIME
OF THE MOLD



WHAT WE ACHIEVED.

A large European manufacturer of automotive brake pads needed to solve major molding issues including improper release, excessive buildup, and long cleaning cycles. Together with the customer's production and process improvement managers, Chem-Trend friction experts analyzed the process to find that the current competitive release agent was contributing to the excessive buildup on stack molds with multiple cavities. A proposed trial of advanced water-based release agent technology was conducted in short order leading the team to a winning new solution that improved mold release performance, significantly reduced buildup, and even increased uptime.

HOW WE GOT THERE.

The engineer responsible for continuous improvement measures in the plant consulted with our technical friction specialist to analyze the manufacturer's highly concentrated resin and ceramic/copper brake pad production line. On the one hand, the brake pads were really difficult to release due to the high resin and metal composition. Not only did the high resin portion cause high buildup leading to considerable mold fouling that necessitated production stops for thorough

cleaning of the mold, but the assessment also showed that the competitive release agent diluted at a 1:4 ration was largely overapplied that even worsened the buildup problem. In search of a better solution, Chem-Trend water-based release agents with varied dilution rates were trialed on-site and closely monitored for buildup and release performance. The Chem-Trend® release agent with a considerably higher dilution rate than the competitive release agent proved to offer an improved, repeatable, and sustainable release result with very low buildup on mold surfaces.

OUR SOLUTION.

Thanks to the much higher dilution rate of 1:20 versus previous competitive dilution rate of 1:4, Chem-Trend's release agent became a real game changer for the brake pads manufacturer. Not only does the Chem-Trend release agent offer a much more reliable and easy release of the harsh resin and ceramic/copper mixture, but it also protects tooling investments by reduced mold fouling and facilitates easy cleaning at much longer time intervals. Combined, the new solution truly maximized operational efficiency.



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HANDPRINT IMPACT

At Chem-Trend, we pride ourselves on our long history of sustainability efforts. However, it is our effect on our customers' processes that provides the greatest impact. It goes beyond our global Footprint; it is our even wider Handprint.

Here, we achieved the following:

- Less energy consumption waste through fewer stoppages for cleaning
- Less material consumption by offering advanced release agent with excellent release performance
- Less waste thanks to less scrap parts and less buildup