



Water-based Mould Release Agents

CASE STUDY: A Clean Approach to VOC Requirements

Situation:

A major European automotive component manufacturer was facing serious pressure to reduce plant VOCs, due to upcoming legislation and European Union directives regarding industrial VOC reductions. They were injecting water-blown polyurethane ISF, using solvent-based IMC with a solvent-based mould release agent. High levels of VOCs were used in their process. To compound their situation, there were concerns that switching to a water-based release agent would not provide a high quality part and result in a lengthy mould cleaning process using dry-ice (solid CO₂) blasting of moulds after every 8-hour production shift. This process is slow and noisy and would result in an

increased amount of solid CO₂ required to clean away the more difficult to remove build-up. The chemical mould cleaner they were using in combination with ice-blasting contained an aggressive/corrosive ingredient that plant management wished to ban from their facility.

Solution:

Chem-Trend approached this challenge by addressing it as a total system solution. Chem-Trend's 5000 Series water-based mould release agents were able to successfully replace the solvent-based mould release agents in production whilst maintaining part quality requirements to meet the stringent OEM specifications and requirements. The

working environment was improved due to a reduction in VOCs. Concurrently, Chem-Trend introduced a new mould cleaner technology to the customer specifically for water-based applications that met both of the customer's requirements – elimination of the aggressive/corrosive component (with vastly improved mould cleaning efficiency) and allowing for complete elimination of the CO₂ dry-ice blasting operation.

Benefits:

The customer has been able to dramatically reduce plant VOCs by using a water-based mould release agent in place of a solvent-based release agent, whilst reducing the quantity

of mould release agent applied by more than 10%. With the switch to the new Chem-Trend mould cleaner, the customer no longer uses the previous corrosive mould cleaner and completely eliminated the need for CO₂ dry-ice blasting as a mould cleaning operation. The customer now enjoys greater cost-efficient production along with added benefits of a safer and healthier plant environment.

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