

Vertrel™

Specialty Fluids

Italian Manufacturer Converts to Vertrel™ to Meet New Environmental Regulations and Improves Profitability

Case History

Background

Eliogalvanica, an Italian manufacturer of metal components for clothing, such as zippers and buckles, was using HCFC-141b to dry galvanized parts in its manufacturing process. When new environmental regulations prohibited the use of HCFC-141b, the company turned to its local distributor, Garzanti Specialties, and Chemours for help in evaluating available options.

Although the cleaning performance of the old system was considered to be satisfactory, decision makers at Eliogalvanica did express concern that the solvating

agent in the vapor degreaser had to be replaced frequently to maintain cleaning effectiveness and that the cleaning cycle required a full hour. In addition, this system was leaving a residue on the finished products.

Alternative drying technologies—hot air, vacuum, or centrifugal—were not viable options because they did not deliver acceptable results.

Some commercially available solvents, such as HFC-365, met the environmental requirements but featured distinct disadvantages, including flammability, slower evaporation times, reduced productivity, and a tendency to leave residue on the surface of the parts.



Chemours™

Project Details

The technical experts at Chemours teamed up with representatives from Garzanti Specialties to help Eliogalvanica evaluate two environmentally acceptable specialty fluids—Vertrel™ MCA and Vertrel™ X-DF—in actual cleaning and drying tests.

Vertrel™ MCA is a proprietary blend of Vertrel™ XF with trans-1,2-dichloroethylene. It is ideally suited for use in vapor degreasing equipment for precision cleaning and specialty applications. Its enhanced solvency power makes it particularly effective with very difficult soils.

Vertrel™ X-DF displacement drying systems offer one-step, low-energy, spot-free drying that is efficient, safe to use, and environmentally responsible. Vertrel™ X-DF consists of Vertrel™ MCA, which is an azeotrope, and a surfactant. The process uses the high density and low surface tension (wetting ability) of Vertrel™ MCA fluid and a hydrophobic surfactant additive that promotes water separation, while ensuring the spot-free drying of electrically non-conductive parts.

Based on the results from the evaluation, Eliogalvanica decided to convert to Vertrel™ MCA for degreasing and Vertrel™ X-DF for drying. The conversion was relatively quick and easy to do because the equipment required only minor adjustments to convert to these specialty fluids.

Results

Since converting to Vertrel™ MCA and Vertrel™ X-DF specialty fluids, Eliogalvanica has seen improvements in productivity, quality, and customer satisfaction; all while meeting new environmental regulations.

Specifically, the key advantages include:

- Spot-free performance for higher quality parts.
- Shorter cycle times, which translate to increased productivity, improved quality, and higher profits.
- Lower operating temperature, which minimizes damage to heat-sensitive parts.
- Lower energy consumption for reduced operating costs.
- Higher soil loading capabilities, which significantly extend the time required between system change-outs—improving productivity and decreasing maintenance costs.
- Improved safety because low emissions of the solvent ensure concentrations near the equipment are well below allowable exposure limits.
- No ozone depletion potential (ODP) and low global warming potential (GWP) to meet stringent environmental regulations and requirements.

Conclusion

With technical support from Garzanti Specialties and Chemours, Eliogalvanica was able to find environmentally acceptable solvent solutions for its manufacturing process that also improved product quality and delivered important benefits to the company's bottom line.

Simply stated, converting to Vertrel™ MCA and Vertrel™ X-DF specialty fluids is helping to make Eliogalvanica more profitable and better positioned in a competitive market.

The Chemours technical services team is available to provide expert support to valued partners and customers around the world. This technical expertise, combined with a portfolio of advanced specialty fluids, allows Chemours to offer a range of products that are safe, effective, and environmentally acceptable.

For more information on Vertrel™, please visit vertrel.com or call (800) 235-7882.

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