

## **TRADE BULLETIN FOR IMMEDIATE RELEASE**

### **Chemetall introduces silicate- and borate-free cleaning technology**

(BATON ROUGE, La., New Providence, NJ, Frankfurt a.M., Germany) May 5, 2016 - Chemetall, a leading global surface treatment supplier and division of Albemarle Corporation, has successfully introduced Gardoclean<sup>®</sup> S 5411 at several automotive OEMs. The new cleaner is free of silicate and borate. It offers enhanced occupational safety and is easy to handle. The multi-metal compatible cleaner offers optimized performance, especially on steel substrates. The technology is suitable as part of zinc-phosphate processes and the Oxsilan<sup>®</sup> thin-film technology.

#### **Enhanced productivity with eco-friendly profile**

Dietmar Chmielewski, Vice President, Technology at Chemetall, explains “Substances like boric acid and disodium borate are already listed on the REACH SVHC candidate list and a ban is expected on cleaners containing these substances. With Gardoclean<sup>®</sup> S 5411 we have developed an innovative solution that meets today’s and tomorrow’s market demands with additional benefits for the users.” The new cleaning technology enables lower consumption rate and increased productivity while being a very robust and sustainable process. Due to its excellent product characteristics, Gardoclean<sup>®</sup> S 5411 allows a reduction in temperature (energy savings) as well as cleaning time (productivity gains).

#### **Automotive industry appreciates new technology**

Gardoclean<sup>®</sup> S 5411 can be used in many industries and is excellently suited to meet a major automotive trend. The automotive industry is highly critical when selecting silicate-based cleaners and sometimes refuses to use them. Although silicates support excellent cleaning performance, they may cause dry-on marks and paint defects on the substrate surface. These defects must be addressed manually, which is very costly. Furthermore, silicate-containing cleaners cannot be used when pretreating aluminium during thin-film processes, as they inhibit the required etching of the aluminium surface. Thus, Gardoclean<sup>®</sup> S 5411 is the ideal sustainable solution for the automotive industry and all others who need to enhance their cleaning performance.

**About Albemarle**

*Albemarle Corporation, headquartered in Baton Rouge, Louisiana, is a premier specialty chemicals company with leading positions in attractive end markets around the world. With a broad customer reach and diverse end markets, Albemarle develops, manufactures and markets technologically advanced and high value added products, including lithium and lithium compounds, bromine and bromine derivatives, catalysts and surface treatment chemistries used in a wide range of applications including consumer electronics, flame retardants, metal processing, plastics, contemporary and alternative transportation vehicles, refining, pharmaceuticals, agriculture, construction and custom chemistry services. Albemarle is focused on delivering differentiated, performance-based technologies that deliver innovative and sustainable solutions to its customers. Albemarle employs approximately 6,900 people and serves customers in approximately 100 countries. Albemarle regularly posts information to [www.albemarle.com](http://www.albemarle.com), including notification of events, news, financial performance, investor presentations and webcasts, Regulation G reconciliations, SEC filings and other information regarding Albemarle, its businesses and the markets it serves.*

*Chemetall Surface Treatment, a global business unit of Albemarle Corporation, is a leading global supplier of specialty chemicals with a focus on processes for the surface treatment of metals and plastics. To learn more, visit [www.chemetall.com](http://www.chemetall.com).*

*"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: Statements in this press release regarding Albemarle's business that are not historical facts are "forward-looking statements" that involve risks and uncertainties. For a discussion of such risks and uncertainties, which could cause actual results to differ from those contained in the forward-looking statements, see "Risk Factors" in Albemarle's Annual Report on Form 10-K and its Quarterly Reports on Form 10-Q.*

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