

KACO Relies On High-Temperature Fortron[®] PPS from Celanese to Help Solve Sealing Challenges for VW Engine Components

Ideal Material for Weight Reduction and Cost Saving

Sulzbach, Germany, Florence, Ky., Shanghai, PR China, Oct. 16, 2013 – Sealing system manufacturer KACO, Heilbronn (SABÓ-Group, São Paulo) has developed an innovative sealing shim and flange that relies on high-temperature Fortron[®] polyphenylene sulfide (PPS) from Celanese Corporation (NYSE: CE), the global technology and specialty materials company.

Crank case, sealing flange and oil pan: Three components meet in a small space under the hood and have to be sealed statically against one another. The flange also has to ensure dynamic sealing to the crankshaft.

A seal made from a new friction-reduced polytetrafluoroethylene (PTFE) compound, in conjunction with Fortron 4332L6 PPS, is used in the production of the flange. The optimized sealing shim design and the structure of the sealing flange enable considerable cost savings due to the integration of several functions in one component. The PTFE sleeve ensures dynamic sealing while a special silicone seal sprayed directly onto the flange ensures the static sealing to the oil pan and to the crank case. A plasma activation process specially developed by KACO ensures the bonding of the PPS material to the PTFE sealing shim. This ensures firm bonding of the two materials thus dispensing with the need for the wet chemical etching technique previously often used in such production steps. A previously used multi-pole wheel is replaced by a steel sensor wheel developed especially for VW. Together with a Hall sensor with a magnet it supplies additional information for engine management thus enabling start/stop technology for example.

Ideal Material Properties

Weight reduction and cost saving were the key reasons KACO chose Fortron PPS. Other important properties included:

- High temperature resistance, from -40 degrees Celsius to 150 degrees Celsius (-40 degrees Fahrenheit to 302 degrees Fahrenheit) and short-term 170 degrees Celsius (338 degrees Fahrenheit)
- Stiffness and strength
- Resistance to chemicals
- Outstanding dimensional stability and low creep

Fortron PPS has passed numerous and extensive material tests for resistance to modern engine oils that frequently include aggressive additives.

About Celanese

Celanese Corporation is a global technology leader in the production of differentiated chemistry solutions and specialty materials used in most major industries and consumer applications. With sales almost equally divided between North America, Europe and Asia, the company uses the full breadth of its global chemistry, technology and business expertise to create value for customers and the corporation. Celanese partners with customers to solve their most critical needs while making a positive impact on its communities and the world. Based in Dallas, Texas, Celanese employs approximately 7,600 employees worldwide and had 2012 net sales of \$6.4 billion. For more information about Celanese Corporation and its product offerings, visit www.celanese.com or our blog at www.celaneseblog.com.

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Forward-Looking Statements

This release may contain “forward-looking statements,” which include information concerning the company’s plans, objectives, goals, strategies, future revenues or performance, capital expenditures, financing needs and other information that is not historical information. When used in this release, the words “outlook,” “forecast,” “estimates,” “expects,” “anticipates,” “projects,” “plans,” “intends,” “believes,” and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements are based upon current expectations and beliefs and various assumptions. There can be no assurance that the company will realize these expectations or that these beliefs will prove correct. There are a number of risks and uncertainties that could cause actual results to differ materially from the forward-looking statements contained in this release. Numerous factors, many of which are beyond the company’s control, could cause actual results to differ materially from those expressed as forward-looking statements. These factors include the inability to obtain regulatory approvals of the transaction and satisfy conditions on the proposed terms and schedule and the possibility that the transaction does not close. Other risk factors include those that are discussed in the company’s filings with the Securities and Exchange Commission. Any forward-looking statement speaks only as of the date on which it is made, and the company undertakes no obligation to update any forward-looking statements to reflect events or circumstances after the date on which it is made or to reflect the occurrence of anticipated or unanticipated events or circumstances.

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High Temperature Solution — KACO engine flange relies on high-temperature Fortron[®] polyphenylene sulfide (PPS) from Celanese Corporation to help seal key underhood components.