

Press Release

2013/04/22

Henkel at “Engine Expo 2013” in Stuttgart

Step by step: Innovative solutions from Henkel for the powertrain

Aimed at meeting the ever-increasing requirements on automotive efficiency, performance and service life, Henkel has developed an array of innovative product solutions covering the full range of powertrain manufacturing processes. Henkel’s presence at “Engine Expo 2013” – Europe’s leading international trade fair for engine technologies, taking place from June 4 to June 6 in Stuttgart, Germany – will focus on a range of multifunctional surface treatment solutions, adhesives and sealants designed to contribute to the optimization of assembly processes.

With its unique combination of innovative products and process know-how, Henkel not only contributes to the smooth and cost-efficient production of powertrain components but also helps enhance durability, safety and sustainability through compliance with the highest of quality standards. Henkel has solutions supporting every step along the value chain: Cleaning, cooling and lubrication during the manufacture of powertrain components, plus surface treatment, bonding and sealing at the assembly stage. Henkel – world market leader for adhesive technologies – thus plays a significant role in shaping trends in the automotive industry. Worthy of particular mention in this respect is the growing importance of lightweight construction technologies and the constant need to reduce emissions and fuel consumption.

Multifunctional electroceramic coatings

Under the brands Loctite and Bonderite, Henkel is able to offer a select range of electroceramic coatings (ECC) for various engine and exhaust system applications. Suitable for aluminum, titanium, magnesium and their alloys, these coatings enable such metals to be used in the manufacture of light constructions that would normally

require steel, thus greatly reducing vehicle weight. With beneficial tribological properties leading in particular to reduced wear, Henkel's electroceramic coatings also contribute significantly to increasing engine component efficiency and saving fuel. Tests also show that ECC helps reduce harmful engine emissions by diminishing the quantity of nitrogen oxides produced during fuel combustion. Further, diesel engines are found to be less noisy, thus meeting the ever present need for quieter vehicles. Henkel's electroceramic coatings further combine outstanding corrosion protection with high resistance to extreme thermal loading, satisfying the prime prerequisites for, say, exhaust system and turbocharger component longevity.

ECC also delivers top performance for Porsche Motorsport, with which Henkel has a mutually beneficial collaboration agreement. Henkel is committed to supporting this partner not only as an official Porsche Mobil 1 Supercup sponsor but also through heavy involvement in Porsche's product development activities. Henkel products are therefore regularly tested by Porsche under the extreme conditions that only motor sport can provide.

Innovative liquid gasketing portfolio

Gaskets are incorporated in powertrain components to prevent gas and liquid leakage. Aside from its liquid gasketing products, based on anaerobic-curing specialty products and silicones and used primarily for engine components, Henkel has also now developed a range of innovative polyacrylate gasketing systems. These Loctite products offer exceptional resistance to aggressive transmission oils and axle lubes and can therefore be relied upon to durably seal flanges and similar connections on transmission cases, differentials and axles. The new technology exhibits up to a nine-fold reduction in volatile organic compound vapor permeability compared to conventional gaskets. In addition, polyacrylate-based liquid gaskets offer the advantages of not affecting the foaming behavior of transmission and axle lubricants, and of being paint-coatable.

Automotive manufacturers appreciate not only Henkel's high-performance products but also its ability to provide corresponding design know-how and the necessary process and metering equipment for various methods to be used in simply and efficiently applying these gasketing products to the customer's components during the production process. And as a system supplier, Henkel also offers sealant solutions for servicing and repair applications.

Reliable porosity sealants for drive components

Porosity – and the possibility of leakage – is always a concern when it comes to the casting of cylinder blocks, cylinder heads, transmission cases and similar from light

metal alloys. However, such problems can be quickly and reliably avoided by having Henkel seal these components. For this, the components are sent to special service centers where – in a fully automatic process – they are impregnated under vacuum with a Loctite resin, so sealing the pores and avoiding scrap. This certified process is already in operation at many renowned automobile manufacturers and component suppliers.

During Stuttgart's Engine Expos from June 4 to June 6 2013, Henkel's experts will also be available at Stand 3610 to provide comprehensive information on the wide range of products and system solutions that the company offers for the manufacture of powertrain components.

For more information, visit our website www.henkel.com/automotive.

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Henkel operates worldwide with leading brands and technologies in three business areas: Laundry & Home Care, Beauty Care and Adhesive Technologies. Founded in 1876, Henkel holds globally leading market positions both in the consumer and industrial businesses with well-known brands such as Persil, Schwarzkopf and Loctite. Henkel employs about 47,000 people and reported sales of 16,510 million euros and adjusted operating profit of 2,335 million euros in fiscal 2012. Henkel's preferred shares are listed in the German stock index DAX.

Photo material is available at <http://www.henkel.com/press>

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The following material is available:



Covering the full range of powertrain manufacturing processes, Henkel has developed an array of innovative product solutions.



Henkel offers a select range of electroceramic coatings suitable e.g. for the coating of IC engine pistons.



Offering tailored process know-how, Henkel facilitates the simple and efficient application of its liquid gasketing compounds.