

## **DYNAVIS® technology increases energy efficiency in plastics processing**

- Lower energy consumption through optimized hydraulic fluids
- DYNAVIS® technology successfully used in injection molding machines
- More than 10 percent energy savings possible

Lowering production costs and conserving resources: a good way to reach these goals is to increase energy efficiency through the use of optimized hydraulic fluids. DYNAVIS® technology from Evonik Industries, one of the world's leading specialty chemical companies, offers a promising approach for hydraulically operated machines in plastics processing. By optimizing the viscosity of the custom-tailored fluid, it is possible to achieve energy savings in manufacturing processes and to conserve resources. Compared to conventional fluids, those formulated with DYNAVIS® technology can lower the energy consumption of some injection molding machines by more than 10%. DYNAVIS® is used by some of the world's leading companies, such as TOTAL, Indian Oil Corporation, and Indonesia's PT Pertamina Lubricants, and is becoming increasingly popular in the market.

The technology improves the flow characteristics of hydraulic fluids by widening the temperature range and efficiency of hydraulic units. Normally, hydraulic equipment works with high efficiency in just a particular temperature range; at temperatures that are too high or too low, the performance of the machine can drop. Oils formulated with DYNAVIS® technology have optimized viscosity: at low temperatures they flow better, while at higher temperatures they remain more viscous. When used in injection molding machines, the machine not only uses less drive energy, the fluids with DYNAVIS® also do not get as hot and effectively withstand the shearing forces. "Thanks to fluids formulated with DYNAVIS® technology, it is not only possible to increase machine efficiency, it is also possible to actively conserve resources and lower CO2 emissions", says Rolf Fianke, Global Marketing Manager DYNAVIS® regarding the advantages of the additive technology.

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## Case studies demonstrate efficiency

The efficiency of DYNAVIS® technology has already been demonstrated in several case studies in cooperation with major construction companies. Used in hydraulic excavators and other construction equipment, the fluid saved an average of 10–15% compared to previous fuel consumption. For use in the plastics area, DYNAVIS® has been tested in automated injection molding equipment of the brands BOY and Engel. It was found that the fluids formulated with DYNAVIS® technology reached the optimal temperature range faster and maintained it more precisely. This resulted in energy savings of 7 to 10 percent, corresponding to cost savings of about 400 Euro per year for the BOY 35E, and energy savings of 6.2 percent of the drive energy and about 1200 Euro per year for the Engel Victory 330/120 Tech.

Additional information and detailed case studies are available at [www.dynavis.com](http://www.dynavis.com).

*At the K 2016 fair in Dusseldorf from October 19th to 26th, Evonik will be presenting DYNAVIS® in Hall 6 / Stand B28.*

### Company information

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals, operating in the Nutrition & Care, Resource Efficiency and Performance Materials segments. The company benefits from its innovative prowess and integrated technology platforms. In 2015 more than 33,500 employees generated sales of around €13.5 billion and an operating profit (adjusted EBITDA) of about €2.47 billion.

### About Resource Efficiency

The Resource Efficiency segment is led by Evonik Resource Efficiency GmbH and supplies high performance materials for environmentally friendly as well as energy-efficient systems to the automotive, paints & coatings, adhesives, construction, and many other industries. This segment employed about 8,600 employees, and generated sales of around €4.3 billion in 2015.

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