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May 26, 1998

For Immediate Release

The U.S. market for gasoline detergent additives (GDA) has been greatly affected by Federal mandates resulting from the implementation of the Clean Air Act Amendments of 1990. Consumption of formulated GDA packages declined from 410 million lbs in 1993 to 295 million lbs in 1997, according to a new study by Colin A. Houston & Associates, Inc. (CAHA), a consulting firm in Pound Ridge, NY. A major reason for the decline is that the U.S. EPA regulations published in July 1996 and effective July 1997 required lower GDA treat rates than the industry had been using and recommending. The study, entitled *U.S. Gasoline Detergent Additives, 1997-2004*, addresses future GDA consumption by detailing three scenarios for GDA consumption in 2000 and 2004 based on different regulatory and technical developments.

Gasoline detergent additives are effective in cleaning up and in preventing deposits that reduce engine efficiency and fuel economy by clogging fuel injectors and intake valves. Detergent additives are also used to prevent combustion chamber deposits, and in recent years two products have been found effective in cleaning up combustion chamber deposits (CCD). Texaco's Clean System 3^R and Oronite's Techron^R reduce all types of deposits, including CCD.

MORE

MORE

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Only a small number of companies produce detergent additive packages. The leaders, in addition to Texaco and Oronite (Chevron), are BASF, Ethyl, and Shell. Lubrizol is a leader in supplying additive packages and ingredients for after-market products. Oronite has the largest share of the U.S. market (43 percent), and BASF is the market leader in Europe (38 percent).

The U.S. market has moved from the use of lower molecular weight detergents to high molecular weight compounds, known as polymeric dispersants. There are only four main chemistries: polybutene amines, polyether amines, alkyl succinimides or Mannich types (polyalkene hydroxy benzyl polyamine). However, there are many variations within these categories, and performance depends upon the formulation of the entire additive package including carrier fluid and solvent. Extensive research is devoted to finding more effective products. Once a new molecule is identified, development and testing of a new detergent additive could take two or more years and cost \$1 to 2 million.

Future use of gasoline detergent additives will depend on many factors, including legislation, fuel composition, engine design, and in the long term, alternative fuels and vehicles. CAHA's study examines all these complex factors and provides three scenarios for GDA consumption by type through 2004. Further details of CAHA's study are available from Colin A. Houston & Associates, Inc., 20 Milltown Road, Suite 206, Brewster, NY 10509; Phone: 845-279-7891; Fax: 845-279-7751