Abstract

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OCTANE IMPROVERS FOR GASOLINE

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Lead phaseout in the United States has brought about a strong interest in oxygenated octane improvers for gasoline. In the 1980s, the use of MTBE as a gasoline octane improver saw meteoric growth. This is expected to continue as U.S. refiners begin major gasoline reformulation as mandated by the 1990 Clean Air Act. The use of other oxygenates, such as ethers and alcohols, will also become more common in the future. This report examines the state-of-the-art technologies and economics for the manufacture of MTBE, ETBE, and etherified gasoline.

We also evaluate the economics associated with the likely process changes and modifications that refiners will have to make in order to produce reformulated gasoline. Since the United States leads the world in reformulating gasoline, most of our attention is devoted to this country. However, the trends and conclusions should also be relevant to other industrialized nations.

The report details worldwide 1990 production capacities for all ethers and alcohols that may be used as octane improvers. MTBE supply projections for 1995 and 2000 are also included. This report will be useful for refiners and petrochemical producers in understanding the technologies and economics of producing octane improvers and in identifying future opportunities.

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