

August 28, 2000
Kuraray Co., Ltd.

**Kuraray Has Decided to Build 12,000 ton/yr “SEPTON” “HYBRAR”
Thermoplastic Elastomer Plant in the U.S.**

Kuraray Co., Ltd. has decided to construct a new U.S. plant with an annual capacity of 12,000 tons in Pasadena, Texas, in order to expand its thermoplastic elastomer business (Kuraray’s brand names for hydrogen-modified styrene elastomers are “SEPTON” and “HYBRAR”). Kuraray will also expand the capacity of its Kashima plant in Japan, and thus it intends to increase its combined global production to 50,000 tons per year by 2005.

This project is part of Kuraray’s global strategy for this business, which is growing steadily worldwide, while at the same time increasing importance is being placed on environmental protection issues, such as reduced energy consumption, recycling, PVC-free and solvent-free products. Meanwhile, the decision to move forward with the construction of the plant was based, in part, on the pledge of economic support of the project, which was received from government officials.

Thermoplastic elastomer is a synthetic rubber with excellent elasticity, which can be processed like typical thermoplastic polyolefines. It is thus being used for a wide variety of applications, including as a substitute for vulcanized rubber and flexible PVC. The thermoplastic elastomer manufacturing process does not require the addition of sulfur, unlike the manufacture of vulcanized rubber. Therefore, productivity is good and the total production cost is low. In addition, since it does not contain any chlorine or other plasticizers, this material is rapidly replacing flexible PVC in the U.S., Europe, and Japan, due to recent environmental concerns in these areas.

Its applications include car interiors, electrical appliances, housing materials, and also toys, tools, and stationery. Also, a transparent flexible material is produced by mixing thermoplastic elastomer with polypropylene. The use of this material is growing in food packaging and medical equipment due to its excellent physical characteristics. In addition, it is also used to improve the impact strength of engineering plastics (it makes a heat-resistant, high-strength plastic used in automobiles and electronic materials) and to reduce the brittleness of hard plastics. The market for these uses has also grown in recent years. The world market for this type of thermoplastic elastomer was 60,000 to 70,000 tons in 1999 (estimated by Kuraray), and is expected to grow at more than 10% a year, exceeding 100,000 tons annually in four to five years.

To cope with the growth of the market, Kuraray increased the production capacity of its Kashima plant from 9,000 tons in 1997 to 19,000 tons in 1999. Kuraray had planned to expand the production capacity of the Kashima plant further. However, noting the rapid expansion in demand for this material, it has decided instead to construct a new plant in the U.S., which is the largest market for thermoplastic elastomers, investing approximately 75 million dollars (about 8 billion yen). The new U.S. plant will have an annual production capacity of 12,000 tons and begin operation in the third quarter of 2002. Tracking the increase in demand, Kuraray plans to increase its capacity both in Japan and abroad to a total annual output of 50,000 tons by 2005. At that point, annual sales should be around 240 to 280 million dollars (about 25 to 30 billion yen).

1. Outline of the new U.S. plant

Location: Pasadena, Texas, U.S.A.

Adjacent to the "EVAL" plant of the EVALCA (Eval Company of America), a subsidiary of the Kuraray group.

Capacity: 12,000 tons annually

Investment: approximately \$75,000,000 (about 8 billion yen)

Daily operation of the new plant:

A local company will be established to manufacture, sell and provide technical support for the product.

2. Major applications

Field	Typical applications
Automobiles	Interior surfaces, handles, instrument panels, wheel covers, weather stripping, vibration-damping parts
Electrical appliances	Refrigerator gaskets, vacuum cleaner casters, packing materials, wire coatings, IC trays, telephone cables
Housing and furniture	Window frames, veneer coatings, joint compounds
Food packaging	Caps for PET bottles, wine bottle corks
Medical	Tubes, transfusion bags, chemical bottle stoppers
Bonding, sealing	Paper diapers, sanitary items, automobile sealants
Miscellaneous	Handles (tooth brushes, tools, stationery), toys, sports shoes, swim masks