

Toyobo High-performance Fibers: Investing Actively and Developing Global Markets

Toyobo Co., Ltd. announces its decision to invest in expansion of production capacity for its high-performance polyethylene fibers currently sold under the trademarks Dyneema[®] and TsunoogaTM as part of its global business development.

Accompanying these decisions, Toyobo has decided to introduce a new brand name, IZANASTM and has positioned it as a strategic global product. Toyobo will discontinue its use of the Dyneema[®] trademark.

1. Background Information

Toyobo began joint research on high-performance polyethylene fibers with DSM of the Netherlands (Royal DSM N.V.), in 1984. In 1991, a joint venture manufacturing company Nippon Dyneema Co., Ltd was established and it commenced production of high-performance polyethylene fibers. Since then, Toyobo has been selling the fiber under the brand name Dyneema® in Japan. Subsequently, the sales has grown steadily, and its applications have expanded widely to include fishing lines and cords, heavy duty ropes used for mooring ships, protective gloves, nets, special industrial materials and so on.



In recent years, Toyobo aims to realize the global expansion of its business by developing new products and expanding production capacity.

As the brand name Dyneema[®] has been used for Toyobo products and DSM products in the market, some customers have experienced confusion.

To address these issues, Toyobo has decided to give its products a Toyobo's original brand name to clarify the differences between its own products and products produced by other companies including DSM, and develop sales aggressively in the global markets where further growth is expected.

2. Investment Plans

• Investment in IZANASTM Production Facilities

At present, Toyobo is planning to refurbish and upgrade the production facilities at Nippon Dyneema's Tsuruga Plant (located in Tsuruga City, Fukui Prefecture) and begin production of new products with even higher strength and performance. New product launches are scheduled for April 2017.

• Investment in TsunoogaTM Production Facilities

TsunoogaTM, another Toyobo's high-performance polyethylene fiber is favorably used in protective gloves. Plans, therefore, together with IZANASTM, call for expanding production capacity for TsunoogaTM and new capacity is expected to come on stream in April 2017.

Total investment in IZANASTM and TsunoogaTM production facilities will amount to ¥2.0 billion. Both fibers will be marketed also overseas under the Toyobo's original brand names.

3. New Brand Name

- Brand name: IZANASTM
- Logo marks





• Effective date: April 1, 2016

Beginning in April 2016, Toyobo products will be sold under the new brand name IZANASTM, a replacement for the current brand name, Dyneema[®]. The trademark Dyneema[®] will continue to be used exclusively by DSM.

■ Background on High-Performance Polyethylene Fiber

The high-performance polyethylene fiber was developed jointly by Toyobo and DSM, and branded by both companies as Dyneema[®]. It has an extremely low specific gravity of 0.97g/cm³ and the highest level of tensile strength and modulus among commercialized organic high-performance fibers. Dyneema[®] fiber is about eight times stronger than piano wires, and ropes made from this fiber with a



diameter of 10mm can support a weight of about 20 tons (theoretical value).

At present, Dyneema[®] fiber is used in the manufacturing of fishing lines and cords, heavy duty ropes used for mooring ships, protective gloves, nets, special industrial materials and so on.

Nippon Dyneema currently produces 3,200 tons of Dyneema® fiber annually and Toyobo sells its share of this output mainly to its customers in Japan.

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