

TBM launches "LIMEX Sheet 80μm" The first mass-produced product of "Tagajo Factory"

~ A thin sheet made mainly from limestone, produced with 100 percent renewable energy ~

Tokyo, January 21, 2022 – TBM Co., Ltd. ("TBM") today announces the launch of "LIMEX Sheet 80μm", a thin sheet suitable for catalogs, annual reports, labels, packaging, and other paper alternative products with environmental consciousness. LIMEX Sheet 80μm is produced with 100 percent renewable energy in the second self-owned LIMEX production factory "Tagajo Factory", which was completed in 2021 with a subsidy from the Ministry of Economy, Trade, and Industry.

By this launch of 80μm in addition to 150-400μm LIMEX Sheet manufactured in TBM's first domestic factory "Shiroishi Factory", LIMEX Sheet for printed materials that requires thinner and lighter weight is now available to the market to meet wider demands. Compared to general paper, LIMEX Sheet can reduce the amount of water used during manufacturing and use no wood pulp. In addition, it does not require lamination for water resistance and able to be recycled with no inferior as products designed with a single material. TBM has implemented several LIMEX sheet recycling initiatives utilizing existing recycling equipment in collaboration with companies, consumers, and local governments.

Tagajo Factory has a film formation process in place to improve efficiency, enhance the physical properties and quality stability of LIMEX Sheet. By pursuing cost efficiency through the mass production, TBM aims to promote further expansion of LIMEX Sheet for commercial print usage and accelerate developments of sheet applications such as labels and packaging materials.

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LIMEX Sheet 80μm Debut Go Beyond Expectations



■ Background

Currently, paper production requires water and wood pulp as raw materials, however, it is expected that 51% of the world's population will fall into high water risk by 2050^{*1}, and approximately 100,000 square kilometers^{*2} of natural forest has been lost every year since 2015. At COP26 (The 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change) held in November 2021, the "Glasgow Leaders' Declaration on Forests and Land Use" was announced, and in more than 100 countries including Japan (86% of the world's forest area) agreed on the goal of ending deforestation by 2030.

^{*2} WWF "Water Risk Scenarios" (2020)

^{*3} FAO "Global Forest Resources Assessment 2020" (2020)

■ About LIMEX Sheet 80 μ m

LIMEX sheet is manufactured by T- die sheet extrusion of the molten composite and stretching process controlling a porous structure to create whiteness and lightness. It is manufactured at Shiroishi and Tagajo Factory, which uses 100 percent renewable energy with no CO₂ emission factor. It is widely used in many companies for catalogs, annual reports, posters, and sales promotion POP displays showing their high environmental awareness through the usage of the material LIMEX itself.

Five features of LIMEX Sheet

1. Save water, forest, and petroleum resource

Compared to paper, LIMEX Sheet 80μm uses almost no water required during manufacturing and does not use wood pulp at all, which leads to the conservation of forest resources. Moreover, amount of greenhouse gas and petroleum-based plastic can be reduce compared to PP (polypropylene) and PET sheets.

2. Price stability and price advantage

Since limestone is an extremely abundant resource worldwide, price fluctuation is small, and can be provided at a stable price. LIMEX Sheet 80μm can be offered at a lower price than PP (polypropylene) and PET sheets. Also, it has price competitiveness with art paper and coated paper used for catalogs, and waterproof papers.

3. Excellent durability and water resistance

Compared to paper, LIMEX Sheet 80μm is superior in durability and water resistant. It is suitable for outdoor posters, and table menus as it wipes clean without no lamination.

4. High-quality smooth texture

LIMEX Sheet 80μm has a high-quality smooth texture and holds ink with razor-sharp precision. It is suitable for catalogs, calendars, folding boxes for luxurious brands.

5. Easy and diverse recycling possible

Like other LIMEX Sheets, products made by LIMEX Sheet 80μm and scraps generated in the manufacturing process can be recycled. TBM will utilize the existing recycling machines and the Yokosuka recycling plant scheduled to be completed in fall of 2022 as a material recycling platform for LIMEX, and produce various recycled injection molded products such as stationery, daily necessities, logistics/building materials.










PRESS RELEASE



■ LIMEX Sheet type and usage

White / soft type

- 80µm: Booklets, calendars, maps, wrapping papers, delivery slips, labels (under development), packaging (under development) etc.

Printed Material			Label
			
Catalog	Annual report	Disaster prevention book	
			Package
Floor Guide	Map	Calendar	
			Wrapping Paper
			

- 150µm / 200µm: Posters, booklets, price tags, calendars etc.
- 300µm / 400µm: Folded boxes, sales promotion POP displays, business cards, table menu, tapestries etc.

Semi-transparent / hard type

- 150µm / 200µm: Plastic file folders, mask cases, illumination sheets, folded boxes etc.

White / hard type

- 300µm / 400µm: Table menu, folded boxes, sales promotion POP displays, hand fans, calendars etc.

[Orders / Inquiries]

Please contact us through the inquiry form: <https://tb-m.com/en/contact/>

■ About LIMEX

LIMEX is a composite material consisting of over 50% inorganic substances. It is patented in over 40 countries and has been used in over 6000 companies and organization. It has been introduced in global conferences such as COP and G20 and is registered in the sustainable technology dissemination platform "STePP" by UNIDO (United Nations Industrial Development Organization) as a recyclable material. When used as an alternative of paper or plastic, it can contribute to the conservation of resources with high risk of depletion such as oil, water and forest resources, and the reduction of greenhouse gases.

- Recycling LIMEX

LIMEX can be recycled without separating the inorganic and thermoplastic resin. The possibility of recycling is guaranteed as with products designed with a single material. TBM have implemented multiple LIMEX recycling initiatives utilizing existing recycling equipment in collaboration with companies, consumers, and local governments.

- Why limestone?

Limestone, which is the main raw material of LIMEX, is a resource that is abundant across the world. Compared to petroleum-based plastics, limestones can reduce CO₂ emission during the raw material procurement stage by about 1/50 and can reduce CO₂ emissions during combustion by about 58%.

■ About TBM Co., Ltd.

TBM is a company based in Japan specializing in developing, manufacturing, and distributing LIMEX[®], an innovative new material mainly made from limestone and inorganic materials. The basic patents of LIMEX have been registered in 40 countries and has been introduced to over 6,000 companies in Japan. LIMEX is registered in the sustainable technology dissemination platform "STePP" by UNIDO (United Nations Industrial Development Organization) as a recyclable material that can be an alternative to paper and plastic. By supplying LIMEX worldwide, TBM aims to solve plastic waste issues, resource depletion, and various environmental issues. In 2020, TBM was evaluated as the third-largest unicorn company in Japan.

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