

To all media personnel whom it may concern

**TBM presents LIMEX Bag, a product containing zero petroleum derived resin, at the G20 Innovation Exhibition**  
**~Exhibited at the G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth~**

TBM Co., Ltd. (Headquarters: Chuo-ku, Tokyo; CEO: Nobuyoshi Yamasaki. Hereafter referred to as TBM) develops, manufactures, and sells 'LIMEX,' a new material made of limestone as its primary raw material. LIMEX has the potential to substitute paper without consumption of water and wood pulp, as well as substitute plastic whilst reducing the use of petroleum derived raw materials. TBM would like to announce that it has become ready to productize its ongoing project of developing a LIMEX bag made of limestone, containing zero petroleum derived resin.

Furthermore, between June 14<sup>th</sup> (Friday) to 16<sup>th</sup> (Sunday) 2019, TBM will be involved in the 'G20 Innovation eExhibition' at the 'G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth' hosted by the Ministry of Economy, Trade and Industry, and the Ministry of Environment in Karuizawa of Nagano prefecture. At this exhibition, TBM will present various LIMEX products that can potentially replace paper and plastic, in addition to the new LIMEX Bag made of zero petroleum derived resin.

**LIMEX**

## ■ Background

There is an increasing demand for companies to contribute towards achieving the SDGs as well as to become involved in dealing with issues such as plastic pollution. From this year, regulations on plastic has strengthened overseas, over 40 countries such as India, China, and African nations have implemented strict restrictions on plastic bag usage, and in the EU bills have been passed to ban disposable plastics, including plastic bags. Furthermore, in Japan, the Ministry of Environment is considering imposing a levy on plastic bags in retail businesses such as supermarkets and convenience stores.

As regulations on disposable plastics increase, TBM has received over 500 inquiries from around the world as it attracts global attention for its plastic substitute material, LIMEX. At the COP24 (24th Conference of Parties to

the United Nations Framework Convention on Climate Change) held in Poland last year, it hosted the event ‘LIMEX: Limestone paves the road to a de-carbonized circular economy’ in which LIMEX shopping bags and trash bags were presented. In addition, at the G20 Ibaraki-Tsukuba Ministerial Meeting on Trade and Digital Economy held between June 8<sup>th</sup> (Saturday) – June 9<sup>th</sup> (Sunday) 2019, upcycling initiatives using LIMEX (promotion of a circular economy) was introduced as a business example that businesses and governments from around the world could reference.

■ LIMEX Bag made of 100% non-petroleum based resin

Sales of the limestone-based ‘LIMEX Bag,’ a new bag made from stone and is neither a plastic bag or a paper bag have begun since this spring. This LIMEX Bag does not use any petroleum-based resin, as its raw materials are limestone and biomass based resin. As a material with the potential to substitute regular plastic bags, shopping bags, and trash bags, it can greatly contribute to conserving oil, water, and forest resources as well as reducing CO2 emissions (the manufacturing of LIMEX products hardly requires any water or tree input, thereby largely contributing to forest resource conservation compared to paper bags). By utilizing inexpensive limestone as its main raw material, the raw material costs are reduced to a large extent compared to if it was made purely out of biomass based resin.



■ G20 Innovation Exhibition

This exhibition will be carried out during the ‘G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth’ and involve presentations by some of Japan's most advanced energy and environment related technologies based around themes such as hydrogen energy, marine plastic pollution, and innovation. In addition to government efforts, hands on interactive displays will be presented by companies and organizations. As an example of an innovation that contributes to environmental sustainability, TBM will introduce its initiatives regarding LIMEX, a new limestone-based material to replace paper and plastic.

< Overview >

Name G20 Innovation Exhibition for Earth, Society and the Future  
 Date June 14<sup>th</sup> (Fri) – 16<sup>th</sup> (Sun), 2019  
 Venue A section of the parking lot at Prince Shopping Plaza in Karuizawa



〒389-0102 Karuizawa, Karuizawa-cho, Kitasaku-gun, Nagano Prefecture

Sponsor Ministry of Economy, Trade and Industry, Ministry of the Environment

URL <https://www.g20karuizawa.go.jp/en/exhibition/outline/>

## ■ About the new material 'LIMEX'

---

### [ What is LIMEX ]

- LIMEX is an inorganic filler-dispersed composite containing over 50% inorganic substances such as calcium carbonate, and is a new material from Japan.
- 2013: Chosen by the Ministry of Economy, Trade and Industry to be aided as one of the Innovation Base Promotion Businesses through the "Subsidy for Advanced Technology Demonstration and Evaluation Facility Development."
- 2014: Obtained a patent within Japan. Currently registered in more than 30 countries including Japan, China, USA and Europe.
- 2015: Established the first plant with an annual capacity of 6,000 tons in Shiroishi City, Miyagi Prefecture.
- 2016: Received the first 'Social Impact Award' at Plug and Play in Silicon Valley, USA.
- 2017: Received the 'Innovation Showcase' at the 7<sup>th</sup> Japan-US Innovation Award
- 2018: Represented the Japanese Government upon participating in COP24 (Conference of the Parties to the United Nations Framework Convention on Climate Change)
- 2019: Exhibited at the 'G20 Innovation Exhibition' at the 'G20 Ministerial Meeting on Energy Transitions and Global Environment for Sustainable Growth' hosted by the Ministry of Economy, Trade and Industry, and the Ministry of Environment

### [As an alternative to paper]

• LIMEX does not require trees nor water for production, and 1 ton of paper-alternative LIMEX products (LIMEX Sheets) can be manufactured with 0.6~0.8 tons of limestone and 0.2~0.4 tons of polyolefin.

※Japan's domestic paper manufacturing industry not only cuts down trees but also carries out afforestation initiatives overseas.

※Used paper alternative LIMEX products should be disposed of as combustible waste. (Not for wastepaper collection)

### [As an alternative to plastic ]

- The main raw material of LIMEX is limestone, thereby greatly reducing the use of petroleum derived resin.
- LIMEX is composed of limestone as the main raw material together with petroleum derived resin, but the development of a biodegradable LIMEX which replaces petroleum derived resin with 100% biomass-based and biodegradable resin is under consideration.
- Has high price competitiveness by using inexpensive limestone as its main raw material.
- Upcycling of Plastic alternative LIMEX products can be manufacturing from recycled printed materials using LIMEX. (Upcycling of LIMEX)

### [ Reserves of Limestone ]

- Limestone is a resource that can be 100% locally sourced in Japan, and reserves around the world are abundant.

■ TBM Co., Ltd.

---

CEO: Nobuyoshi Yamasaki

Headquarters: 6<sup>th</sup> Floor, 2-7-17, Ginza, Chuo-ku, Tokyo

Founded: 2011

Capital: 10, 744,800 million yen (Including legal capital surplus) / As of June 2019

Business description: Development, manufacturing and sales of LIMEX and LIMEX products

URL: <https://tb-m.com/en/>

---

\* Company names and product / service names mentioned in this press release are trademarks or registered trademarks of their respective owners.

\* The contents of this news release are as of the release date. It is subject to change without notice.

---

————— Contact details regarding this Press Release —————

TBM Co., Ltd. Corporate Communication Division Takayuki Sasaki and Yuzuru Kikuta

Global Business Division Tomoya Nakamura

TEL: +81-3-3538-6777 FAX: +81-3-3538-6778 Email: [infomail@tb-m.com](mailto:infomail@tb-m.com)