

News Release

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BASF supplies Asahi Kasei's ROICA with biomass balanced tetrahydrofuran

- **ROICA™ to produce more sustainable stretch fibers for sportswear and other textiles**
- **ROICA™ by Asahi Kasei aims to achieve CO₂ reduction of about 50% by using renewable energy plus BASF's THF BMB¹**
- **Accelerate renewable feedstock use in the textile value chain to support increasing global demand for more sustainable textile products**

BASF is supplying biomass balanced tetrahydrofuran (THF BMB)² to the ROICA Division of Asahi Kasei Corporation (Asahi Kasei), a multinational Japanese company. Asahi Kasei will use BASF's THF BMB to produce its mass balance grade premium sustainable stretch fiber under the ROICA™ brand. This collaboration aims to support the launch of a new sustainable apparel collection by Asahi Kasei's customers.

ROICA™ supplies its mass balance (MB) stretch fiber as an option for most of its portfolio products. The brand is making its debut in the market with MB stretch fibers and has already initiated discussions with several apparel manufacturers.

BASF's THF BMB is recognized for its significant reduction in product carbon footprint compared to its standard grade of THF products. This is achieved by replacing a certain amount of fossil raw materials in the production with renewable

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feedstock in its Verbund setup. According to Asahi Kasei, utilizing BASF's THF BMB can lead to an approximately 25% reduction in CO₂ emissions compared to its existing products. Additionally, by introducing its own mass balance approach and renewable energy in the production, Asahi Kasei aims to further reduce CO₂ emissions of its products by approximately 25%, resulting in a total reduction of CO₂ emissions by approximately 50% compared to Asahi Kasei's existing products.¹ Without the need of large investments or changes to the product's formulation, BASF's THF BMB drop-in solution³ ensures identical quality and properties as the standard product.

Choon Nga Phua, Director, Business Management Diols & Derivatives, Intermediates Asia Pacific, BASF, said, "We are excited about the progress we have made in our sustainability partnership with Asahi Kasei. We see a growing trend in the adoption of more sustainable raw materials in the global apparel market. As a pioneer in the development of the biomass balance approach, we will support our customers in accelerating the transition to a lower-carbon, circular bio-economy and help consumers make informed purchasing decisions about more sustainable products, thereby fashioning a more sustainable textile value chain."

"As one of the global leaders in the development and manufacturing of innovative materials, we view this as another step in our efforts to bring our business pillar of originality and sustainability together," said Takehiro Kamiyama, Senior Executive Manager of ROICA Division, Life Innovation SBU, Asahi Kasei.

THF is a colorless, water-miscible liquid with an ether-like odor. In this case, THF is used to produce polytetrahydrofuran (PolyTHF®), which is a raw material for the production of highly elastic spandex and elastane fibers. Furthermore, THF serves as an organic solvent with intermediate polarity for organic substances and is used as a reaction medium or starting material for various syntheses.



Asahi Kasei's ROICA™ mass balance grade sustainable stretch fibers are powered by BASF's THF BMB.

- ¹ Pursuant to Asahi Kasei, the reduction percentage is calculated using the average carbon footprint calculated for all ROICA™ product result in fiscal 2019 (calculated in accordance with ISO 14067: raw materials for petrol-derived raw materials and electric power from Japanese power companies) and the carbon footprint value calculated using the mass balance approach using renewable energy certificates with some raw materials being biomass raw materials. The former is the denominator while the latter is numerator. The calculated value assumes the carbon footprint from the collection of raw materials to the shipment of products from Asahi Kasei's plant.

The emission intensity (CO₂ emissions per activity), the source of the calculated value by Asahi Kasei, is cited from fiscal 2019 results for scope 1 (raw materials) and scope 2 (electric power and steam), and from IDEA ver. 2.3 provided by the Sustainable Management Promotion Organization and information from some suppliers for category 1 of scope 3 (raw materials/one company).

In accordance with ISO 14067, the calculated value by Asahi Kasei deducts the CO₂ absorbed by biomass during its growth.

The calculated value by Asahi Kasei is based on the currently available data and is not a guaranteed value. Please understand that the calculated value may change depending on, for example, the improvement or upgrade of a process or technology or the revision of raw materials data or related laws.

Claim made by Asahi Kasei at their own responsibility. BASF does not verify this nor does BASF endorse or bear responsibility for this.

- ² For a biomass balanced product, BASF replaces 100% of the fossil raw materials which are normally needed to produce the product with renewable feedstock in its Verbund production set-up. The renewable carbon content cannot be physically identified in the final product, but the renewable share is fully attributed to it. This chain of custody methodology is called biomass balance. To ensure transparency, compliance with recognized mass balance standards, such as REDcert2, is independently certified for each biomass balanced product of BASF. BASF's THF BMB is certified by REDcert2.

REDcert2 is a standard for the use of sustainable biomass as raw material in the chemical industry. Regarding BASF's biomass balance approach, certification according to the standard confirms that the biomass used is more sustainable and has been fed into the production Verbund in the required amount. It also confirms that the sustainable biomass has been correctly attributed to the corresponding sales products. The certifications are awarded on the basis of on-site audits conducted by independent auditors.

- ³ Drop-in solutions refer to the use of biomass balanced raw materials that are identical in quality and properties to the standard fossil-based products. Customers can use them without having to adapt their existing manufacturing processes.

About ROICA™

ROICA™ "Advanced fit for living" is a premium stretch fiber with an innovative range of smart features to fit the modern wardrobe. ROICA™ shapes comfort with high quality, performance and fit, adding value to everyday life for sports, activewear, underwear, fashion and business. ROICA™ is a brand of Asahi Kasei Corporation. Further information at [ROICA | Asahi Kasei Corporation Fibers & Textiles \(asahi-kasei.co.jp\)](https://www.asahi-kasei.co.jp/roica)

About Asahi Kasei

Asahi Kasei Corporation is one of Japan's leading chemical manufacturers, and ROICA™, which is located in the Materials Division of Asahi Kasei Corporation, is a "premium stretch fiber" brand that develops business based on polymer science that has been accumulated over its long history. We develop and sell products for a wide range of applications, from clothing such as activewear, outerwear, intimates, and legs, to hygiene products and materials.

Based on our corporate philosophy of "contribute to life and living for people around the world" as the foundation of our business, we place "sustainability" and "originality" at the core of our brand, and continue to take on new challenges while continuing to pursue sustainable growth. We strive to contribute to society as much as possible. Further information at [Asahi Kasei Corporation \(asahi-kasei.com\)](https://www.asahi-kasei.com)

About BASF Intermediates

BASF Group's Intermediates division develops, produces and markets a comprehensive portfolio of more than 600 chemical intermediates around the world. Its most important product groups include amines, diols, polyalcohols, acids and specialties. The division's customers use its intermediates in

many value chains for example as precursors for coatings, plastics, pharmaceuticals, textiles, detergents and crop protectants. The division is offering innovative intermediates which can help to improve both the properties of final products and the efficiency of production processes. Dedicated to sustainability it is supporting its customers with suitable solutions to achieve their targets, e.g. reducing CO₂ emissions and increasing the share of renewable raw materials, thus saving fossil resources. The ISO 9001 certified Intermediates division operates world-scale plants at production sites in Europe, Asia and North America. Around the globe the division generated sales to third parties of about €4.3 billion in 2022. Further information at www.intermediates.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 111,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio comprises six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €87.3 billion in 2022. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the United States. Further information at www.basf.com.