

News Release

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BASF expands its biomass balance portfolio for selected chemical intermediates

- **ISCC PLUS and REDcert^{2*} certified** products include butanediol, tetrahydrofuran, polytetrahydrofuran and 3-(dimethylamino)propylamine**
- **New range of products contribute to the replacement of fossil resources with renewable raw materials according to a certified biomass balance approach**
- **Manufactured at sites in Europe, North America and Asia Pacific**

BASF will expand its biomass balance offering to include BMBCert™ 1,4-butanediol (BDO), tetrahydrofuran (THF), polytetrahydrofuran (PolyTHF®) and 3-(dimethylamino)propylamine (DMAPA). In addition to the production site in Ludwigshafen, Germany, the site in Geismar, Louisiana, has also achieved certifications for all these products. The Ulsan site in South Korea has obtained certification for PolyTHF. With these certifications, BASF can now offer its customers regionally produced ISCC PLUS and REDcert²-certified products for which renewable resources replace fossil feedstock and additionally reduce the cradle-to-gate product carbon footprint (PCF).

“The new certifications for key products in our portfolio demonstrate our commitment to sustainability and our vision to be the preferred partner for sustainable intermediates. With our biomass balance portfolio, we are helping our customers achieve their sustainability goals by replacing fossil-based raw materials and reducing the cradle-to-gate carbon footprint. We are committed to driving the sustainability transformation of the chemical industry and we are proud to offer more

products that contribute to our customers' sustainability goals," said Ketan Joshi, President of BASF's operating division Intermediates.

The BMBcert^{***} offerings contribute to a reduction in fossil feedstock demand. At the beginning of the value chain, fossil-based raw materials are replaced by certified renewable resources, and a corresponding amount of renewable content is attributed to the product according to a mass balance approach. The resulting BMBCert product will have a lower product carbon footprint compared to the conventional BASF product. For example, according to Asahi Kasei Corporation, using BASF's THF BMB to produce its mass balance grade premium sustainable stretch fiber under its ROICA[™] brand could lead to an approximate 25 percent reduction in CO₂ emissions compared to its existing products^{****}.

Essential raw materials in many value chains

BDO is for example used for the production of PolyTHF. BASF's customers use PolyTHF for example to produce elastic spandex and elastane fibers that are used for a wide range of textiles such as swimsuits, sportswear and underwear, but also outerwear such as shirts and stretch jeans. The elastic fibers ensure wearing comfort in the long run, and they are resistant to moisture and microbes. PolyTHF also serves as a chemical building block for the production of thermoplastic polyurethanes (TPU), which BASF customers use to make highly abrasion-resistant and elastic hoses, films and cable sheathing, primarily for the automotive industry. Other applications include thermoplastic polyetheresters, polyetheramides and cast elastomers, which can be used in the manufacturing of various products such as wheels for skateboards and industrial rollers. With production plants for PolyTHF in Europe, North America and Asia Pacific, BASF is one of the world's leading suppliers of this versatile intermediate product.

BDO is a starting material for polybutylene terephthalate (PBT), an engineering plastic that is used successfully – for instance under the BASF brand Ultradur[®] – in the automotive, electrical and electronics industries. BDO also is used as an intermediate for the production of tetrahydrofuran (THF) and N-methylpyrrolidone (NMP), whose main applications are as essential solvents in the manufacturing of pharmaceuticals and for lithium-ion battery cathodes, such as those used in electrical vehicles. With production plants for BDO in Europe, North America and Asia Pacific, BASF is one of the world's leading suppliers of this versatile intermediate product.

DMAPA is an important building block for betaines, which are used in the production of gentle liquid soaps, shampoos and dishwashing detergents. DMAPA is also used in water treatment as well as in the production of plant protection products, lubricant additives, polyurethane foams and epoxy resin hardeners. BASF is one of the world's leading manufacturers of DMAPA with production sites in Europe, North America and Asia-Pacific.

* REDcert² and ISCC PLUS are sustainability certification schemes for the use of sustainable biomass as raw material in the chemical industry. A certification according to these certification schemes confirms that the biomass used is sustainable and has been fed into the production system 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.

** Details on [Sustainable Solutions for Chemical Intermediates \(basf.com\)](https://www.basf.com/sustainable-solutions-for-chemical-intermediates)

*** BMBCert: For a biomass balanced product, BASF replaces 100% of the fossil raw materials which are normally needed to produce the product with renewable resources in its Verbund production setup. The renewable carbon cannot be physically identified in the final product, but the renewable share is fully attributed to it via a certified mass balance approach. This chain of custody methodology is called biomass balance. To ensure transparency, compliance with recognized mass balance standards is independently certified for each biomass balanced product of BASF.

**** News Release: [BASF supplies Asahi Kasei's ROICA with biomass balanced tetrahydrofuran](#)

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Around 112,000 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 €68.9 billion in 2023. 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.

BASF's Intermediates division is a global leader in the development, manufacture and marketing of sustainable chemical intermediates. With more than 600 products in our portfolio, particularly amines, diols, polyalcohols, acids and specialties, we offer innovative solutions for a wide range of industries, from coatings and plastics to pharmaceuticals and crop protection. Our intermediates can improve the properties of end products and increase the efficiency of production processes, and can in addition enable our customers to achieve their sustainability goals. As an ISO 9001 certified division, we operate a global network of production sites in Europe, Asia and North America.

PolyTHF® is a registered trademark of BASF in many countries.