

## Press Release

Geleen (NL), 1 March 2023

### **DSM Engineering Materials helps DiFOLD unlock the next level of circularity in its flagship Origami Bottle Arnitel® Eco**

**DSM Engineering Materials today announces its partnership with sustainability-focused startup DiFOLD, developing foldable reusable products. The startup has chosen DSM Engineering Materials' Arnitel® Eco – a bio-based thermoplastic copolyester – to manufacture its flagship Origami foldable water bottle. Adopting Arnitel® ECO marks a major step forward in DiFOLD's mission to reduce the environmental impact of packaging waste.**

Inspired by the Japanese art of paper folding, the patented and award-winning design of DiFOLD's Origami Bottle means it can fold down to less than 10% of its original volume – greatly improving user convenience and reducing the carbon footprint of shipping. The Origami Bottle provides a durable, reusable, and recyclable alternative to single-use water bottles – helping to avoid plastic packaging waste. And because the bottles are made from DSM Engineering Materials' Arnitel® Eco, the environmental benefits are even greater.

Arnitel® Eco is a bio-based thermoplastic copolyester, partially derived from renewable rapeseed oil. This significantly reduces the material's cradle-to-gate CO<sub>2</sub> emissions – delivering a carbon footprint reduction of up to 50% compared to traditional copolyesters. This measurement is based on an in-depth life cycle assessment (LCA), which includes every stage of the material's production, from the growing of the feedstock crops to the finished product that leaves the factory.

These qualities make Arnitel® Eco a perfect fit for DiFOLD's Origami Bottle. According to the cofounders of DiFOLD, Radina Popova and Petar Zaharinov, circularity and durability were the key factors to consider when choosing a material for their unique product. Popova and Zaharinov commented: *"We wanted a bio-based material that could be recycled, as well as having the specific mechanical properties required by the folding design. We are happy to say that Arnitel® Eco offers the perfect balance of elasticity, plasticity, and circularity."*

Arnitel® Eco delivers high performance with a very low environmental impact. It is BPA-free and can withstand temperatures of between -30°C and +100°C. And it does not absorb the smells or tastes of liquids, giving it a long usable life. On top of this, Arnitel® Eco can also be recycled without any loss of quality in the recovered material. This is essential in helping DiFOLD to meet its goal of creating a closed-loop recycling system for its products. As well as supplying the Arnitel® Eco material, DSM Engineering Materials offered DiFOLD sustainability advice, technical recommendations, and regulatory compliance services.

Pim Janssen, Marketing Manager for Food Contact, Water Contact, and Appliance markets at DSM Engineering Materials, said: *"We are pleased that our services and materials could help DiFOLD in their mission to minimize the impact of packaging on the environment – a topic which is also close to our hearts. By helping to de-fossilize the value chain, Arnitel® Eco contributes to creating a circular economy for materials."*

For more information about Arnitel® Eco visit: [www.dsm.com/engineering-materials/en\\_US/products/arnitel/arnitel-eco.html](https://www.dsm.com/engineering-materials/en_US/products/arnitel/arnitel-eco.html)

For more information about DiFOLD visit: <https://difold.com/>

DSM Engineering Materials has developed a wide range of engineering materials over the years to help its customers in support of a sustainable, low-carbon circular economy and has committed to making available bio- and/or recycled-based alternatives for its entire portfolio by 2030. These circular materials help to de-fossilize the economy and society, reduce plastic waste and carbon footprint, and meet changing legislative and end-consumer demands.

**DSM**

DSM Engineering Materials is a business group of Royal DSM, a global, purpose-led company in Health, Nutrition & Bioscience, applying science to improve the health of people, animals, and the planet. DSM's purpose is to create brighter lives for all. DSM's products and solutions address some of the world's biggest challenges while simultaneously creating economic, environmental, and societal value for all its stakeholders – customers, employees, shareholders, and society at large. The company was founded in 1902 and is listed on Euronext Amsterdam. More information can be found at [www.dsm.com](http://www.dsm.com).

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DSM Engineering Materials helps DiFOLD unlock the next level of circularity in its flagship Origami Bottle Arnitel® Eco. (Photo: DSM Engineering Materials: DSMPR541)

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Forward-looking statements

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