



Human Chemistry, Human Solutions

## NEWS RELEASE

### Tenax® Non-Crimp Fabrics and Tenax® Braided Fibers qualified for Airbus A320neo Spoilers

Tokyo, Japan, July 21, 2020 --- [Teijin Limited](#) announced today that it has qualified its carbon fiber materials Tenax® Dry Reinforcements (DR) for the Airbus A320neo wing spoilers using a Resin Transfer Molding (RTM) process developed by Spirit AeroSystems Inc, one of the world's leading manufacturers of aircraft structural components. The highly automated RTM solution incorporates Tenax® Dry Reinforcements Non-Crimp Fabrics (DRNF) and Tenax® Braided Fibers (DRBF) to form skins and stiffeners while maintaining existing product interfaces, allowing direct replacement of the all final spoiler components.



A320neo Spoiler



Airbus A320neo

Tenax® DRNF and Tenax® DRBF have been developed for resin infusion and resin transfer molding processes which can offer higher productivity and component integration than conventional autoclave molding. Tenax® DRNF are created of bundled carbon fiber filaments being spread out in one direction in multiple layers with different directions, depending on the final component's structural requirements. The fabrics have excellent fiber orientation which results in better mechanical properties than conventional woven fabric and reaches properties equivalent to aerospace grade thermosetting unidirectional prepreg. Tenax® DRBF are applied within the spoiler component structure to act as cavity fillers, these materials have been qualified individually by Airbus specifically for this application.

The combination of the Tenax® DRNF and Tenax® DRBF achieve the Spirit AeroSystems criteria for aircraft component production such as effective process ability, productivity, and cost efficiency. A320neo spoiler components will be manufactured within a new high-volume production facility in Spirit AeroSystems, Prestwick, Scotland.

As one strategic focus of its medium-term management plan for 2020-2022, Teijin is intensively accelerating its development of mid- to downstream applications for aircraft, such as cost-effective carbon fibers with higher-tenacity and higher-tensile modulus, intermediate materials including Tenax® Dry Reinforcement carbon fiber materials, carbon fiber thermoplastic unidirectional pre-impregnated tape (Tenax® TPUD), carbon fiber thermoplastic consolidated laminate (Tenax® TPCL) and thermoset prepreg. Going forward, Teijin intends to further strengthen its carbon fiber and its intermediate material business as a leading solution provider for aircraft applications, targeting annual sales in this field in excess of USD 900 million by around 2030.

### **About the Teijin Group**

Teijin (TSE: 3401) is a technology-driven global group offering advanced solutions in the fields of environmental value; safety, security and disaster mitigation; and demographic change and increased health consciousness. Originally established as Japan's first rayon manufacturer in 1918, Teijin has evolved into a unique enterprise encompassing three core business domains: high-performance materials including aramid, carbon fibers and composites, and also resin and plastic processing, films, polyester fibers and products converting; healthcare including pharmaceuticals and home healthcare equipment for bone/joint, respiratory and cardiovascular/metabolic diseases, nursing care and pre-symptomatic healthcare; and IT including B2B solutions for medical, corporate and public systems as well as packaged software and B2C online services for digital entertainment. Deeply committed to its stakeholders, as expressed in the brand statement "Human Chemistry, Human Solutions", Teijin aims to be a company that supports the society of the future. The group comprises more than 170 companies and employs some 20,000 people across 20 countries worldwide. Teijin posted consolidated sales of JPY 853.7 billion (USD 8.0 billion) and total assets of JPY 1,004.2 billion (USD 9.4 billion) in the fiscal year that ended on March 31, 2020.

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