

# Press release

## Constellium pushes the boundaries of innovation with three new AIRWARE™ products for aerostructures

**Farnborough, 9 July 2012** – Leveraging aluminium's untapped potential, AIRWARE™ is a breakthrough technology designed to help the aerospace industry solve all the challenges ahead, from reducing weight or maintenance effort, to lower environmental footprints with closed recycling loops. Constellium today announced three new AIRWARE™ products that will continue to improve aircraft performance.

- **AIRWARE™ I-GAUGE** is the thickest low-density alloy plate; and its unique and enhanced properties offer a more cost-effective solution to the aerospace value chain. AIRWARE™ I-GAUGE offers OEMs better performance whilst minimizing weight and simplifying manufacturing and/or assembly of complex monolithic shapes. It is particularly suited for wing ribs and nose landing gears, and has already been selected by Airbus for its A350 XWB aircraft.
- **AIRWARE™ I-FORM** is a highly formable product, and coming in sheet form it allows for the design of complex 3D curvature shapes with no loss of mechanical properties and a reduction in manufacturing steps. AIRWARE™ I-FORM is best suited for fuselage nose and tail. It has been selected by Bombardier for its *CSeries*.
- **AIRWARE™ I-CORE** is a high strength extruded product which comes in a low density alloy and is best fitted for a hybrid structure environment. Its ability to absorb energy reduces the risks of structural damages makes it an ideal choice for cargo floor beams.

*"With AIRWARE™ Constellium demonstrates its commitment to bring aluminium solutions in aerospace to the next level. These three new products will help achieve new performance goals. By combining new high performance materials with cost effective fabrication processes or looking into eco-efficient design in hybrid aerostructures, AIRWARE™ is a fully industrial cutting edge technology,"* said Christophe Villemin, President of Constellium's Global Aerospace Division.

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**About Constellium**

Constellium, formerly Alcan Engineered Products, is a global sector leader that develops innovative, value added aluminium products and solutions for a broad scope of markets and applications, including aerospace, mass transportation, automotive, packaging, energy and building and construction.

With over 9,000 employees Constellium is structured in 3 divisions: Global Aerospace, Transportation and Industry (Global ATI); Specialty Sheet; Extrusions & Automotive Structures. Constellium, with headquarters in Paris, is owned by affiliates of Apollo Global Management (51%), Rio Tinto (39%) and the "Fonds Stratégique d'Investissement" FSI (10%). Constellium generated €3.6 billion of revenue in 2011.

[www.constellium.com](http://www.constellium.com)

**About AIRWARE™**

AIRWARE™ is a breakthrough technology designed for all parts of an aircraft structure (fuselage, wings and tail fins). Drawing on a complex structure developed using nanotechnology, AIRWARE™ offers plane manufacturers three key properties: it is 25% lighter than conventional materials, making it possible to optimize the design of structural parts and reduce CO<sub>2</sub> emissions; its superior resistance to corrosion and fatigue extends heavy maintenance intervals to 12 years; and its 100% recyclability makes a major contribution to a sustainable aerospace industry.

**About Constellium's three new products**

- **AIRWARE™ I-GAUGE**

AIRWARE™ I-GAUGE is a smart and unique product that reduces weight and improves the resistance of aircraft's structure while helping cut manufacturing time. 165 mm thick, 46% more corrosion resistant and 25% more fatigue resistant, 100% recyclable, it delivers full design flexibility to produce monolithic wing structures without assembly.

- **AIRWARE™ I-FORM**

AIRWARE™ I-FORM is an exclusive product that contributes to simplify manufacturing routes and allows design of complex 3D curvature shapes with no loss of mechanical properties. Highly formable, 3% lighter, 47% tougher and 40% more corrosion resistant, it allows to reduce the number of manufacturing steps from four to two.

- **AIRWARE™ I-CORE**

AIRWARE™ I-CORE is a high-strength product with the best weight-crashworthiness ratio. 21% stronger, it is the only low density product to pass the crashworthiness test in a hybrid structure environment. Its ability to absorb energy reduces the risks of structural damages in case of crash or emergency landing.

**About Constellium at Farnborough 2012**

Constellium is represented from July 9 to 12 2012 at the Farnborough International Air show with both a booth and a chalet. For the event, Constellium has prepared an exclusive programme for visitors - notably OEMs, MROs and media - focusing on its innovation-driven business model and its products enabling to deliver in terms of fuel consumption, and new maintenance requirements. A presentation of AIRWARE™ I-CORE, AIRWARE™ I-FORM and AIRWARE™ I-GAUGE is planned on July 11 on Constellium's chalet. For more information, please contact: [ConstelliumatFIA2012@apcoworldwide.com](mailto:ConstelliumatFIA2012@apcoworldwide.com)