



**REJILIN**  
Human Chemistry, Human Solutions



A vertical image on the left side of the slide shows a dark blue globe with glowing orange and yellow lines representing a global network or fiber optic connections, with some lines converging on the East Asian region.

## Teijin Limited

**Global technology-driven group operating in main fields:**

- Advanced fibers and composites
- Product converting
- Healthcare
- IT
- Electric materials and performance polymer products

**150 companies and around 17,000 employees worldwide**

\* March 31, 2013

**Consolidated sales of USD 7.4 billion\***



A close-up photograph of industrial machinery used in the production of aramid fibers. The image shows yellow spools of fiber being processed by mechanical components, with a blurred background suggesting a factory setting.

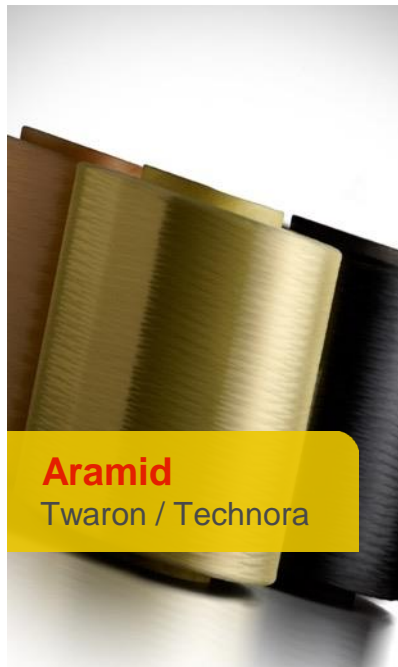
## Teijin Aramid

- Global market leader
- Serving the industry for over 30 years
- Global presence - 1,400 employees worldwide
- Sustainable products & solutions
- More than 80 patent positions
- 5% of turnover invested in R&D
- Dedicated converting facilities
- Member of the Teijin Group



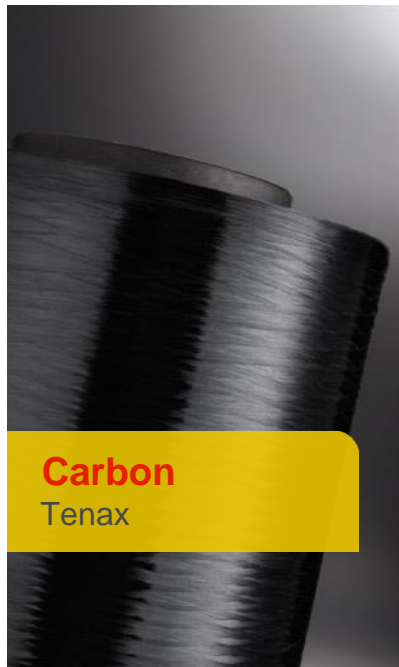
# Materials

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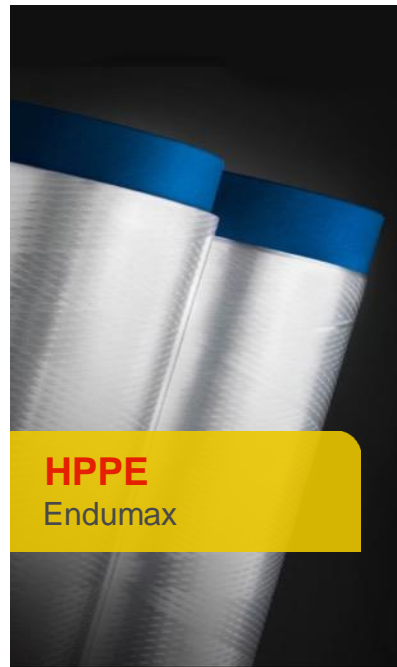
## **Aramid**

Twaron / Technora



## **Carbon**

Tenax



## **HPPE**

Endumax



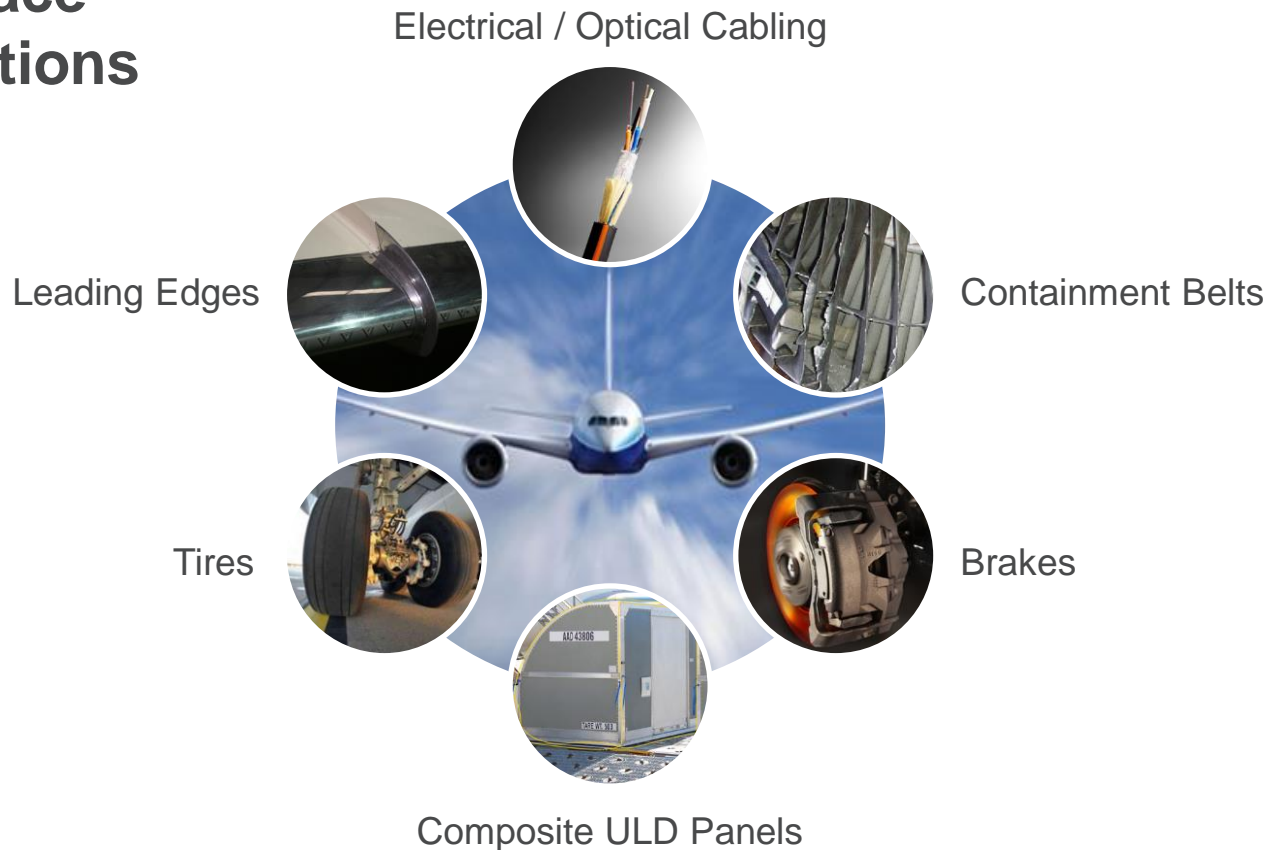
## **Polycarbonate**

Teijin Kasei



# Aerospace Applications

**TEIJIN**





# Endumax panels on Zodiac Herculight S

**TEIJIN**

## Extra strong



*Extra strong upper frame structure*

## Lowest weight



*The weight of an Herculight S AKE container is brought down to 51kg / 112 lbs, while the durability of the panels has increased even further.*



## Highly impact resistant



*High impact resistant composite lower outdoor panel*

## Superior durability

*Herculight S AKE containers with Endumax® are the lightest and most durable available in the air cargo market.*

**EnduMax®**

Connect and Protect





**TEIJIN**

AAD 43806

AAD 43805

**MACRO-Lite:**  
**Hi-Tech & fire resistant**  
**composite ULDs**

TARE WT. 503

**Twaron®**

The power of Aramid





EFFICIENCY  
IN THE AIR



GLOBAL

HARDER, SAFER,  
LIGHTER, STRONGER...



IN A DRIVE TO IMPROVE SAFETY BY DEVELOPING HI-TECH FIRE-RESISTANT CONTAINERS, UPS HAS FOUND IT HAD A MAJOR ADVANTAGE: THE NEW CONTAINERS, SAVING SIGNIFICANT AMOUNTS OF FUEL. SIMILAR PRODUCTS ARE NOW BEING DEVELOPED BY OTHER CARRIERS.

Fire resistant container research began as a safety enhancement at UPS. The include panelling made from a plastic composite material called MACROLite, which with fibre and similar to the material used in bulletproof vests. This project began as a safety enhancement and resulted in a stronger, more efficient air container.

Along with the fire resistant properties, the panels are more durable and lighter than current polycarbonate designs. Testing revealed that adding stress to the MACROLite strengthens rather than weakens it. While supporting the safety strategy of the containers also resulted in fuel savings of over 1,287,040 litres and the avoidance

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Thu, Jul 25, 2013

## UPS Pilots: Fatal Accident Report Spurs Investigation

Company, UPS, Commits to Developing New Air  
Cargo Fire Safety Technology

The General Civil Aviation Authority (United Arab Emirates) has released its final report concerning the fatal crash of a United Parcel Service (UPS) B747-400 in Dubai on September 3, 2010. The report details facts concerning the accident, and makes recommendations addressing air cargo fire safety.



Nearly three years following this tragic accident, UPS pilots welcomed the release of the final report," said Independent Investigation (IIA) President Robert Travis. "Some of the GCAA's recommendations, already being addressed by the company, have already been addressed by the Safety Task Force, created shortly after the accident," he stated.

Travis said the union has worked with UPS to design, build, test and demonstrate for the FAA and NTSB an active fire suppression system capable of suppressing and containing a fire for up to four (4) hours. The technologies incorporated in that container, known as the Unit Load Device, consist of improved materials and a potassium based aerosol suppressant. "We encourage the FAA and UPS to move quickly and deliberately in approving and fully implementing this new technology," added Travis.



# Let's meet!

**TEIJIN**

**Teijin Limited**  
Tatsushi Asahina



**Teijin Limited**  
Hiroyuki Mori



**Macro Industries**  
Norris Luce



**Teijin Aramid**  
Koen Boendermaker



**Teijin Aramid**  
Hendrik de Zeeuw

