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Platilon® Dureflex®

Robust TPU Films for Inflatable Surfing Kite and Wing.

The Market

The rising popularity of water sports boosts the upgrade of material solutions for kites. Covestro develops film products that are applied to the inflatable air bladder materials of surfing kites and wings, providing excellent and reliable performance and providing guarantee and assistance for the development of this sport. Meanwhile, Covestro launched thermoplastic polyurethane (TPU) film products of partly bio-based raw material, promoting the development of surfing kite and wing towards sustainability and a circular economy.

The Solution

TPU film grades with excellent mechanical and air retention properties

Platilon® and Dureflex® TPU films show excellent mechanical properties

- Excellent performance in tensile strength.
- Reduction of film gauge and achieving lighter weight for kite/wing without compromising on mechanical performance.

Platilon® and Dureflex® TPU films perform better in weatherability tests

- Platilon® and Dureflex® retain majority of tensile strength after hydrolysis test with extremely severe test conditions.
- Platilon® and Dureflex® films formulation is intended for applications that are subject to UV exposure.

Platilon® and Dureflex® TPU films customized surface appearance

- Less gel of Platilon® and Dureflex® films ensure air retention and reliability.
- Smooth and non-sticky surfaces simplify the assembly process for manufacturers.

Platilon® TPU film plays an important role in making the transition to sustainability

- We do offer partly bio-based alternatives for some films to support circular economy targets.
- Those films are marked as “CQ” grades using partly bio-based raw materials.

Platilon® Dureflex®

Excellent properties and stable quality ensure reliable performance

Improved kite/wing features

- Lightweight and easy control
- Fly with lower wind power
- Excellent air retention

Simplified maintenance

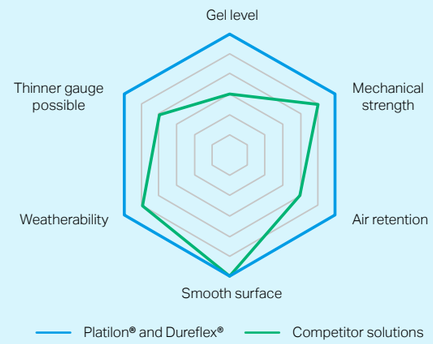
- Proved weatherability simplifies the maintenance of equipment after contact with sea water and exposure to intensive sunlight.
- Smooth and non-sticky surfaces ensure full inflation after long-term storage in a folded condition.

Improved performance

- Less gel accumulation ensures a better performance during the air retention quality control.
- Possible adoption with the help of technical experts from Covestro Technical Competence Center in Shanghai, China, to support prototyping and troubleshooting requests.

Comparison with competitor products

Comprehensive and excellent performance in all KPIs



Platilon® and Dureflex® TPU films show excellent properties and quality in the following aspects:

- Gel quantity
- Weatherability
- Mechanical strength
- Air retention
- Smooth surface
- Thin gauge possible

Product Offering

Wide range of options to suit specific kite/wing requirements

Grade	Description	Thickness in µm	Application
Platilon® U 4201 AU	Polyether grade	50 / 60 / 75 / 80 / 100 / 120	Inflatable bladder
Platilon® U 4201 AUV CQ EC	Polyether grade partly bio-based grade	50 / 60 / 75 / 80 / 100 / 120	Inflatable bladder
Dureflex® PT5150	Polyether grade	75 / 100	Inflatable bladder
Platilon® H2 CQ EC	Copolyamide hotmelt partly bio-based grade	45 (about 50 g/sqm)	Glue for component welding