





Next generation TPU hinge material

Multi-layer blown Platilon[®] ID 9144 film from Covestro applied in passport hinges can make your next generation e-passport safer and more durable. The thermoplastic polyurethane film (TPU) excellently bonds with polycarbonate films and results in a very long-lasting security document.

The product innovation is Covestro's response to a growing demand for highly flexible films which have equal or higher softening temperatures than Makrofol® ID polycarbonate films. This means that passport data pages made of Makrofol® ID polycarbonate cannot be delaminated from the Platilon® ID multi-layer TPU without the destruction of the components.

At the same time, fabric-like properties of TPU enable unlimited bends without the appearance of cracks. By using Platilon[®] ID the integration of the hinge into the data page during the lamination process has been simplified, without creating additional processing steps.

Melt behavior and flexibility of TPU are ideally suited to protect integrated chips and antennas; it can be securely sewn into passports using existing standard methods. The use of Platilon[®] ID as TPU hinge material for passports results in a thin and flexible, yet highly tear-resistant hinge.

Platilon[®] ID 9144 has a core with a significant higher tear propagation resistance (35%) compared to the previous standard product Platilon[®] ID 9122.

Platilon® ID 9144:

- The softening temperature is higher than the softening temperature of Makrofol® ID. Attempts to delaminate Makrofol® from Platilon® will damage the security elements in the passport data page
- Highly flexible material
- Increased resistance to tear propagation
- Easy to process, convert and laminate

Platilon®	Thickness (µm)	Remarks
ID 9144 (transparent)	150 and 250 µm	• Wax free • No PE carrier • Printable
ID 9144 (white)	150 and 250 µm	



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