# Card Durability

## PETF Credentials




## Overview

Schlage® continually invests in resources to identify and extensively test the materials for our products to ensure we're offering the best solutions for our customers. We're proud to now offer a new and improved card material for all Schlage smart and proximity ISO style composite cards, with no increase in the per card price.

This new material delivers cards that are stronger and more durable than other common card materials, providing customers with extended card longevity in even the most challenging environments. This material is standard across all Schlage ISO-compliant composite cards, supporting both 13.56 MHz smart and 125 kHz proximity technologies.

Inclusion of this new material in our composite card offering is testament to our commitment to provide one of the strongest and most cost-effective solutions on the market today.

### Proven resilient

The new material, Melinex® PETF, is structurally different than other card materials. It has been proven in industry testing to be better performing, untearable, less likely to crack or warp in extreme temperatures, solvent resistant, and is more environmentally friendly than other common card materials such as PVC and PETG. PETF cards can readily achieve a 5-10 year card life with normal use.

## Features & Benefits

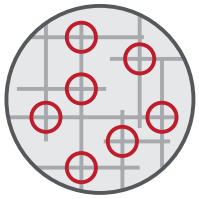
- Stronger and more durable than other common card materials
- Extended card longevity
- Less likely to crack or warp in extreme temperatures

| | PETF | PVC | PETG |
|---|---|---|---|
| Durability | ✓✓✓ | ✓ | ✓ |
| Temperature resistance | ✓✓✓ | ✓ | ✓ |
| Environmental credentials | ✓✓✓ | ✓ | ✓✓✓ |
| Solvent resistance | ✓✓✓ | ✓ | ✓✓ |
| Cost effectiveness | ✓✓ | ✓✓✓ | ✓✓ |

# Why is PETF material used in Schlage ISO style composite cards?



PVC and PETG are amorphous polymer materials which means their structure is made up of polymer chains which have no specific structure.

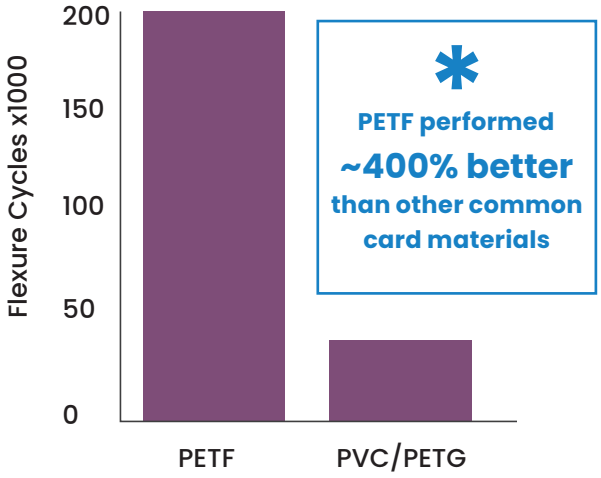


PETF is a biaxially oriented crystalline material with polymer chains locked together in a specific lattice structure. This structure gives it enhanced durability and excellent temperature resistance compared to other materials.

## Melinex PETF and the environment

- PETF is the most widely recycled polymer in the world
- PETF can be produced from raw materials derived from plant materials or post-consumer polymer made recycled bottles
- The manufacturing of PETF does not include the use of controversial chemicals such as BisPhenol A (BPA)
- PETF is safe and widely used in food packaging applications

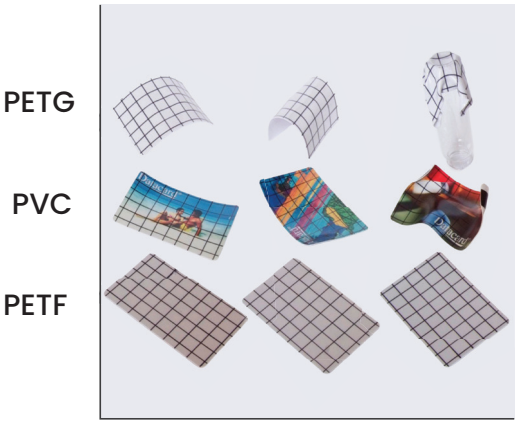
## Flex resistance




ISO Flex Test uses repeated flexture of card to simulate day-to-day use.

PETF showed no failures at the end of the test. Other cards failed with cracking, delamination of card layers or physical damage to the chip or antenna.

## Temperature resistance




PETF offers superior thermal stability compared to both PETG and PVC, including at temperatures found in common printers.

Note : The use of PETF may require minor adjustments to printer settings, contact printer manufacturer or Allegion tech support for details.

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