

## Prelam Products vs. Brand X Test Summary

Below is a summary of test results conducted at Eclipse Laboratories comparing composite cards manufactured with CompoSecure PL5 and PL6 versus an industry standard composite card labeled Card X.

### The composition of CompoSecure Cards is as follows:

CompoSecure Prelam (PL5C, PL6C)  
White PVC core stock (.018" 450 microns or .020" 500 microns)  
CompoSecure Prelam (PL5C, PL6C)

### The composition of Brand X Cards is as follows:

.002" (50 microns) PVC Overlay  
.0075" (187.5 microns) White PVC core stock  
.012" (300 microns) Melinex PET  
.0075" (187.5 microns) White PVC core stock  
.002" (50 microns) PVC Overlay

### COMPOSECURE LAMINATION PARAMETERS

290° F or 143.3° C with 300 PSIA for a 22 minute hot/cold cycle.

### Test Results:

Test Name	PL5C	PL6C	Card X
Delamination 180°	Destructive tear at print surface	Destructive tear at print surface	» Core layers split when torn » Print layer left intact
Delamination 90°	Destructive tear at print surface	Destructive tear at print surface	» Core layers split when torn » Print layer left intact
Flexure	Test stopped at 100,000 flexes on both Axis A & B	Test stopped at 100,000 flexes on both Axis A & B	» Cards failed on Axis A at 47,500 flexes » Test stopped at 100,000 flexes on
Card Structure Integrity	Card retained structure and did not separate	Card retained structure and did not separate	» Corners on several samples started to separate, exposing individual layers

### Comments:

The coefficients of expansion between PVC and PET are very different, thus creating inherent stress in a composite card. The Prelam product is a "buffered" PET, which helps absorb the stress between the two; therefore creating a bond that withstands all severe service testing as shown above.

Prelam products in the above table show that security features are destroyed when a forger attempts to separate the layers of the card.

Cards manufactured with CompoSecure Prelam products are the most durable and secure cards commercially available.

*Eclipse Laboratories Report and Test cards are available for review upon request.*