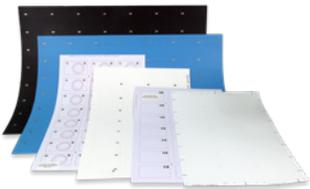




STANDARD AND CUSTOM CONFIGURATIONS TO FIT ANY SPECIFICATION, FROM THE LEADER IN HIGH QUALITY, COST-EFFECTIVE PRELAMINATES



- **Application compatibility:** Specify one or combine multiple integrated chips, in low frequency, high frequency or RAIN UHF, or use chipless inlays for dual interface cards (EMV).
- **Form factor adaptability:** Inlays of virtually any dimensions, in multiple material options and colors.
- **Custom designed and manufactured:** Global expertise and innovation to create the optimal solution for card manufacturer requirements.

Expertise and innovation have established ASSA ABLOY as a worldwide leader in the manufacturing of radio frequency identification (RFID) technology. With our Prelaminate sheets or chipless Inlays, this expertise is embedded in any RFID enabled card you make. Prelaminates and inlays may be customized to fit an existing scheme for single or multi-technology applications.

Prelaminates are ideal for manufacturers producing cards or tags for access management, public transportation, retail, loyalty, NFC and cashless payment applications. We can tune antennas and design custom size and thickness to enable optimized ISO card or non-ISO card form factors.

ASSA ABLOY Prelaminates include durable layers, in a variety of materials, which ensure protection of embedded electronics.

These ultra-thin layers are optimized to extend credential life by withstanding mechanical wear and frequent use. Chipless dual interface inlays from Sokymat are CQM certified, therefore ideal for EMV card production.

Patented wire transfer or wire embedding technology assures optimal performance of the antenna and RFID transponder. A variety of integrated circuits are available to suit a broad range of uses. Our technical support services team can help integrate specialized chips, or develop custom antenna designs to fit your manufacturing and application needs.

Patented LF and HF DBond™ technology ensures highly durable chip-antenna connections and allows ultra thin prelaminate for perfect printing results without visible chip on the finished card.



TECHNOLOGY HIGHLIGHTS:

Integrated chip options for Prelaminates and Inlays include LF, HF and RAIN UHF. These are available individually, in combination or as chipless dual-interface antenna. Options for material include PC, PETG, synthetic paper and Teslin® in white, or transparent material with alternative colors available. Available in various formats as per customer need: CR-80; ID1 as standard otherwise CR-100; XL, XXL, Mini cards. Products are manufactured in ISO9001:2008, ISO 14001:2004 and CQM certified facilities using patented DBond™ technology with many different chip families for improved reliability and reduced prelamine thickness.

APPLICATION AREAS:

ASSA ABLOY meets the needs of manufacturers producing ID and payment cards for access management, public transportation fare collection, and cashless payment systems. They are ideal for loyalty programs, point-of-sale, ATM and EMV cards as well as NFC applications.

SPECIFICATIONS

		Prelaminates				
		Single Frequency			Multi-Frequency	
Base Model Number	Specific to customer format & thickness requirement					
ELECTRONIC						
Operating Frequencies	125 kHz	13.56 MHz		860 -960 MHz UHF	13.56 MHz	125 kHz, 13.56 MHz or UHF
Chip Types	EM4102, Q5, ATA5577, Hitag S	LEGIC Prime family & Advant family	MIFARE Ultralight, Ultralight C, Ultralight EV1 128 Bytes, MIFARE EV1 1K/4K, DESFire EV1/EV2 2K/4K/8K, PLUS SE, PLUS S/X/EV1 2K/4K, SLE66R35R, NTAG 213/215/216, EM NF48K, EM4830	ICODE SLIX2, Vigo™	Monza 4QT/R6; UCODE DNA	Dual Interface (no chip) Combine multiple chips per unit
Available Memory	up to 2048 bit EEPROM	256 bit to 8192 byte read-write		up to 224 bit EPC + up to 3 kbit user memory	Based on requirements	
Modules	Patented DBond™ technology	All standard modules or DBond™ technology		n/a	n/a	Based on requirements
PHYSICAL						
Dimensions	Up to 303 in×248 in (770 mm×630 mm)					
Format	Units per sheet: 15, 21, 24, 40, 42, 48, 56, 72, 80 or custom format for ID1 or other shapes					
Thickness Varies by materials and chips	410 μm to 500 μm	240 μm to 500 μm		290 μm to 500 μm	150 μm to 410 μm	Based on requirements
Thickness over IC Module	n/a	240 μm to 550 μm		n/a	n/a	Based on modules
Housing Materials	PVC, PETG, PC, synthetic paper, Teslin®					
Colors	Standard white; available transparent or custom colors					
CHEMICAL AND MECHANICAL						
Water	50% relative humidity for storage, +/- 10%					
THERMAL						
Storage	73° F (23° C, +/- 3° C)					
Operating	Based on requirements and chip selected					
Shock/Fatigue	Based on requirements and chip selected					
OTHER						
Standards	ISO 14443 or ISO 15693	ISO 14443, optional NFC	ISO 15693, ISO 18000-3, optional NFC	EPC C1G2, ISO 18000-6	Based on requirements, optional NFC	
Options	Layout; material; color; transparency; other chips; Customized card size (CR100, XL, XXL)					
Certifications	ISO 9001:2008, MasterCard® CQM certification, Industry-specific product certifications					
Warranty	1 Year					

ASSA ABLOY can create a custom prelamine or inlay solution to fit your application requirements for chip type, dimensions, programming and materials.



ASSA ABLOY