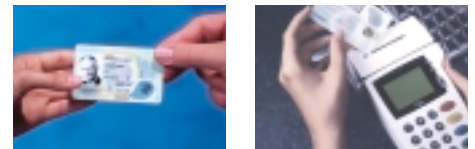




## High Security Identification Cards – leading to a new world of identification



Unification of traditional printing know-how, highly sophisticated personalization and smart chip technologies in one card

Today as in the past, the most important requirements of Governmental Institutions implementing a new identification card are: Highest level of security against counterfeiting and highest durability and life time. Giesecke & Devrient supplies a complete integral security system for anti-counterfeiting protection

- from data capturing to identification detection features
- combined with a high security personalization
- either laser engraving or special thermal transfer solution for the card.

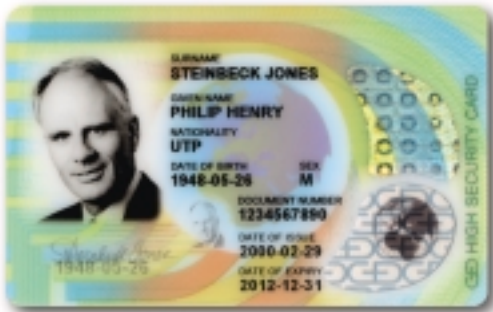
Due to the experience in national and international banknote printing, G&D offers a large range of printing security elements, proven in the past, combined with highly sophisticated new security features.

G&D has gained long term experience in selecting, qualifying and serial use of card materials, proven in many projects with different card applications. This enables G&D to offer today a huge range of materials from medium term durability to high tech exceptionally long life material polycarbonate.

The multipurpose use of identification cards leads to new requirements. G&D offers a wide range of appropriate smart card solutions from memory chips to powerful microprocessor chips, based on contact or contactless technologies. On request our smart card solutions are particularly tailored to the modern needs of Internet Security and Biometric Applications.

G&D is a global leader in the emerging market for identification documents. The needs of our customers are our challenge.

- ID cards
- Driving License cards
- Immigrant/Asylum seeker cards
- Social insurance/pension cards
- Military ID-cards



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### Specifications:

Depending on the card material our cards fulfil the following specifications:

- Bending strength (ISO/IEC 10373): 2 - 10 x ISO 7816/1 cycles (= 10,000)
- Bending strength (DIN 32753/1): 3 - 30 x ISO 7816/1 cycles (= 30,000)
- Torsional strength (ISO/IEC 10373): 2 - 20 x ISO 7816/1 cycles (= 20,000)
- Temperature performance - cantilever method (DIN 32 753/1): 70°C - 140 °C
- Bond strength (ISO/IEC 7810):  $\geq 6$  N/cm
- Light-fastness (DIN 54004, exposure method 2):  $\geq 4$
- Opacity (ISO 7810):  $\geq 1.5$

These tests are also performed after artificial ageing. For this purpose, the cards are first stored for 7 days under heat and pressure between elasticised foils, or exposed to alternating high and low temperatures (-35° to +70 °C).

### Additional physical characteristics:

- The properties of the used card materials ensure sufficient flexibility and flatness of the card during its service life
- The card is not detrimental to health with normal use
- The chemical resistance corresponds to the requirements of ISO/IEC 7810:1995, tested according to ISO/IEC 10373
- The cards - depending on the card material - are fully operative at temperatures between -35 °C and +120 °C, exceeding the specification in ISO/IEC 7810:1995
- The cards are fully operative at relative humidities between 5% and 95% at 25° C, in conformity with ISO/IEC 7816-1:1987
- The card dimensions are in conformity with the ICAO standards
- G&D has certified most of the important chip suppliers

### G&D contact:

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