COMMISSION DIRECTIVE 2003/127/EC

of 23 December 2003

amending Council Directive 1999/37/EC on the registration documents for vehicles

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 1999/37/EC of 29 April 1999 on the registration documents for vehicles (¹), and in particular Article 6 thereof,

Whereas:

(1) Directive 1999/37/EC laid down harmonised rules concerning the registration certificates for vehicles subject to registration in the Community.

(2) In view of the increasing introduction of electronic and telematics equipment in vehicles, the Annexes to Directive 1999/37/EC should be adapted to scientific and technical progress to allow Member States to issue vehicle registration documents in microprocessor smart card format instead of paper documents.

(3) Directive 1999/37/EC should therefore be amended accordingly.

(4) The measures provided for in this Directive are in accordance with the opinion of the Committee instituted by Article 8 of Council Directive 96/96/EC (²),

(5) Member States should implement the necessary measures to ensure that the collection and processing of personal data required for the issuing of vehicle registration documents in the format of smart cards complies with Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (³),

HAS ADOPTED THIS DIRECTIVE:

Article 1

The Annexes to Directive 1999/37/EC are replaced by the text in the Annex to this Directive.

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 15 January 2005 at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 3

This Directive shall enter into force on the 20th day following that of its publication in the *Official Journal of the European Union*.

Article 4

This Directive is addressed to the Member States.

Done at Brussels, 23 December 2003.

For the Commission
Loyola DE PALACIO
Vice-President

(¹) OJ L 138, 1.6.1999, p. 57.
(²) OJ L 46, 17.2.1997, p. 1.
(³) OJ L 281, 23.11.1995, p. 31.

ANNEX

'ANNEX I

PART I OF THE REGISTRATION CERTIFICATE (¹)

I.   This part may be implemented in either of two formats: as a paper document or as a smart card. The characteristics of the paper document version are specified in Chapter II and those of the smart card version in Chapter III.

II.   **Specifications of Part I of the Registration Certificate in paper format**

II.1. The overall dimensions of the Registration Certificate shall not be greater than an A4 format (210 × 297 mm) or a folder of A4 format.

II.2. The paper used for Part I of the Registration Certificate shall be made secure against forgery by using at least two of the following techniques:

— graphics,

— watermark,

— fluorescent fibres, or

— fluorescent imprints.

Member States are free to introduce additional security features.

II.3. Part I of the Registration Certificate may consist of several pages. Member States shall determine the number of pages in accordance with the information contained in the document and its layout.

II.4. The first page of Part I of the Registration Certificate shall contain:

— the name of the Member State issuing Part I of the Registration Certificate,

— the distinguishing mark of the Member State issuing Part I of the Registration Certificate, namely:

B   Belgium
DK   Denmark
D   Germany
GR   Greece
E   Spain
F   France
IRL Ireland
I   Italy
L   Luxembourg
NL   Netherlands
A   Austria
P   Portugal
FIN Finland
S   Sweden
UK   United Kingdom,

— the name of the competent authority,

— the words "Part I of the Registration Certificate" or, if the certificate consists of one part only, the words "Registration Certificate", printed in large type in the language or languages of the Member States issuing the Registration Certificate; they shall also appear, after a suitable space, in small type in the other languages of the European Community,

— the words "European Community", printed in the language or languages of the Member State issuing Part I of the Registration Certificate,

— the number of the document.

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(¹) The certificate consisting of one part only will bear the words "Registration Certificate", and there will be no reference in the text to "Part I".

II.5. Part I of the Registration Certificate shall also contain the following data, preceded by the corresponding harmonised Community codes:

(A) registration number;

(B) date of first registration of the vehicle;

(C) personal data;

    (C.1) holder of the Registration Certificate:

        (C.1.1) surname(s) or business name,

        (C.1.2) other name(s) or initial(s) (where appropriate),

        (C.1.3) address in the Member State of registration on the date of issue of the document;

    (C.4) Where the particulars specified in II.6, code C.2 are not included in the Registration Certificate, reference to the fact that the holder of the Registration Certificate:

        (a) is the vehicle owner,

        (b) is not the vehicle owner,

        (c) is not identified by the Registration Certificate as being the vehicle owner;

(D) vehicle:

    (D.1) make,

    (D.2) type,

        — variant (if available),

        — version (if available);

    (D.3) commercial description(s);

(E) vehicle identification number;

(F) mass:

    (F.1) maximum technically permissible laden mass, except for motorcycles;

(G) mass of the vehicle in service with bodywork, and with coupling device in the case of a towing vehicle in service from any category other than M1;

(H) period of validity, if not unlimited;

(I) date of the registration to which this certificate refers;

(K) type-approval number (if available);

(P) engine;

    (P.1) capacity (in cm³),

    (P.2) maximum net power (in kW) (if available),

    (P.3) type of fuel or power source;

(Q) power/weight ratio (in kW/kg) (only for motorcycles);

(S) seating capacity,

    (S.1) number of seats, including the driver's seat,

    (S.2) number of standing places (where appropriate).

II.6. Part I of the Registration Certificate may, moreover, contain the following data, preceded by the corresponding harmonised Community codes:

(C) personal data,

    (C.2) owner of the vehicle (repeated as many times as there are owners),

        (C.2.1) surname or business name,

        (C.2.2) other name(s) or initial(s) (where appropriate),

        (C.2.3) address in the Member State of registration, on the date of issue of the document,

(C.3) natural or legal person who may use the vehicle by virtue of a legal right other than that of ownership,

  (C.3.1) surname or business name,

  (C.3.2) other name(s) or initial(s) (where appropriate),

  (C.3.3) address in the Member State of registration, on the date of issue of the document,

(C.5), (C.6), (C.7), (C.8): where a change in the personal data given in points II.5, code C.1, II.6, code C.2 and/or II.6, code C.3 does not give rise to the issue of a new Registration Certificate, the new personal data corresponding to these points may be included under codes (C.5), (C.6), (C.7) or (C.8); they are then broken down in accordance with the references in points II.5, code C.1, II.6, code C.2, II.6, code C.3 and II.5, code C.4;

(F) mass:

 (F.2) maximum permissible laden mass of the vehicle in service in the Member State of registration;

 (F.3) maximum permissible laden mass of the whole vehicle in service in the Member State of registration;

(J) vehicle category;

(L) number of axles;

(M) wheelbase (in mm);

(N) for vehicles with a total exceeding 3 500 kg, distribution of the technically permissible maximum laden mass among the axles:

 (N.1) axle 1 (in kg),

 (N.2) axle 2 (in kg), where appropriate,

 (N.3) axle 3 (in kg), where appropriate,

 (N.4) axle 4 (in kg), where appropriate,

 (N.5) axle 5 (in kg), where appropriate,

(O) technically permissible maximum towable mass of the trailer:

 (O.1) braked (in kg),

 (O.2) unbraked (in kg);

(P) engine:

 (P.4) rated speed (in min-1),

 (P.5) engine identification number;

(R) colour of the vehicle;

(T) maximum speed (in km/h);

(U) sound level:

 (U.1) stationary (in dB(A)),

 (U.2) engine speed (in min-1),

 (U.3) drive-by (in dB(A));

(V) exhaust emissions:

 (V.1) CO (in g/km or g/kWh),

 (V.2) HC (in g/km or g/kWh),

 (V.3) NOx (in g/km or g/kWh),

(V.4) HC + NOx (in g/km),

(V.5) particulates for diesel (in g/km or g/kWh),

(V.6) corrected absorption coefficient for diesel (in min-1),

(V.7) CO2 (in g/km),

(V.8) combined fuel consumption (in l/100 km),

(V.9) indication of the environmental category of EC type-approval;

reference to the version applicable pursuant to Directive 70/220/EEC. (¹) or Directive 88/77/EEC (²).

(W) fuel tank(s) capacity (in litres).

II.7 Member States may include additional information (in Part I of the Registration Certificate), in particular they may add between brackets to the identification codes, as laid down under II.5 and II.6, additional national codes.

III. **Specifications of Part I of the Registration Certificate in smart card format** (Alternative to the specimen in paper format described in Chapter II)

III.1 *Card format and data legible with the eye*

Being a microprocessor card, the chip card shall be designed in accordance with the standards mentioned in Chapter III.5. The data stored on the card should be legible with normal reading devices (such as for tachograph cards).

Printed on the front and back of the card shall be at least the data specified in Chapters II.4 and II.5; these data shall be legible with the eye (minimum character height: 6 points) and printed on as follows. (Examples of possible lay-outs are presented in Figure 1 at the end of this section.)

A. Basic imprint

The basic data shall contain the following:

Front

(a) To the right of the chip location:

in the language(s) of the Member State issuing the Registration Certificate

— the words "European Community";

— the name of the Member State issuing the Registration Certificate;

— the words "Part I of the Registration Certificate", or, if the certificate consists of one part only, the words "Registration Certificate" printed in large type;

— another (e.g. previous national) designation of the equivalent document (optional);

— the name of the competent authority (alternatively, also in the form of a personalisation imprint as per Letter B);

— the unambiguous consecutive number of the document as used within the Member State (alternatively, also in the form of a personalisation imprint as per Letter B);

(b) Above the chip location:

the distinguishing mark of the Member State issuing the Registration Certificate, white in a blue rectangle and surrounded by twelve yellow stars:

B Belgium

DK Denmark

D Germany

GR Greece

E Spain

F France

(¹) Council Directive 70/220/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to measures to be taken against air pollution by gases from positive-ignition engines of motor vehicles (OJ L 76, 6.4.1970, p. 1), Directive as last amended by Commission Directive 2002/80/EC (OJ L 291, 28.10.2002, p. 20).
(²) Council Directive 88/77/EEC of 3 December 1987 on the approximation of the laws of the Member States relating to the measures to be taken against the emission of gaseous pollutants from diesel engines for use in vehicles (OJ L 36, 9.2.1988, p. 33). Directive as last amended by Commission Directive 2001/27/EC (OJ L 107, 18.4.2001, p. 10).

IRL Ireland

I   Italy

L   Luxembourg

NL   The Netherlands

A   Austria

P   Portugal

FIN Finland

S   Sweden

UK   United Kingdom

(c) Member States might consider adding, at the lower edge in small type and in their national language(s), the note: "This document should be produced to any authorised person requesting it."

(d) The basic colour of the card is green (Pantone 362); alternatively, a green-to-white transition is possible.

(e) A symbol representing a wheel (see proposed lay-out in Fig.1) shall be printed within the printing area in the bottom left corner of the card front.

In other respects, the provisions of Chapter III.13 shall apply.

B. Personalisation imprint

The personalisation imprint shall contain the following information:

Front

(a) the name of the competent authority — see also Letter Aa)

(b) the name of the authority issuing the Registration Certificate (optional)

(c) the unambiguous consecutive number of the document as used within the Member State — see also Letter Aa)

(d) The following data from Chapter II.5; according to Chapter II.7, individual national codes may be added to the preceding harmonised Community codes:

Code	Reference
(A)	registration number (official licence number)
(B)	date of first registration of the vehicle
(I)	date of the registration to which this certificate refers

personal data

(C.1)	holder of the Registration Certificate
(C.1.1)	surname or business name
(C.1.2)	other name(s) or initial(s) (where appropriate)
(C.1.3)	address in the Member State of registration on the date of issue of the document

(C.4)   Where the particulars specified in Chapter II.6, code C.2 are not included in the imprint of the Registration Certificate defined in the Letters A and B, reference to the fact that the holder of the Registration Certificate
(a) is the vehicle owner;
(b) is not the vehicle owner;
(c) is not identified as the vehicle owner in the Registration Certificate;

Back

The back shall bear at least the remaining data specified in Chapter II.5; in accordance with Chapter II.7, individual national codes may be added to the preceding harmonised Community codes.

In detail, these data are:

Code   Reference

Vehicle Data (in consideration of the notes in Chapter II.5)

	(D.1)	make
	(D.2)	type (variant/version, where appropriate)
	(D.3)	commercial description(s)
(E)		vehicle identification number
	(F.1)	max. technically permissible laden mass, except for motorcycles (kg)
(G)		mass of the vehicle in service with bodywork, and with coupling device in the case of a towing vehicle in service from any category other than M1 (kg)
(H)		period of validity, if not unlimited
(K)		type-approval number (if available)
	(P.1)	displacement (cm^3)
	(P.2)	nominal power (kW)
	(P.3)	type of fuel or power source
(Q)		power/weight ratio (in kW/kg) (only for motorcycles)
	(S.1)	number of seats, including driver's seat
	(S.2)	number of standing places (where appropriate)

Optionally, additional data from II.6 (with the harmonised codes) and II.7 may be added on the back of the card.

C. Physical security features of the smart card

The threats to the physical security of documents are:

— Production of false cards: creating a new object which bears great resemblance to the document, either by making it from scratch or by copying an original document.

— Material alteration: changing a property of an original document, e.g. modifying some of the data printed on the document.

The material used for Part I of the Registration Certificate shall be made secure against forgery by using at least three of the following techniques:

— microprinting,

— guilloche printing*,

— iridescent printing,

— laser engraving,

— ultraviolet fluorescent ink,

— inks with viewing angle — dependent colour*,

— inks with temperature — dependent colour*,

— custom holograms*,

— variable laser images,

— optical variable images.

Member States are free to introduce additional security features.

As a basis, the techniques indicated with an asterisk are to be preferred as they enable the law enforcement officers to check the validity of the card without any special means.
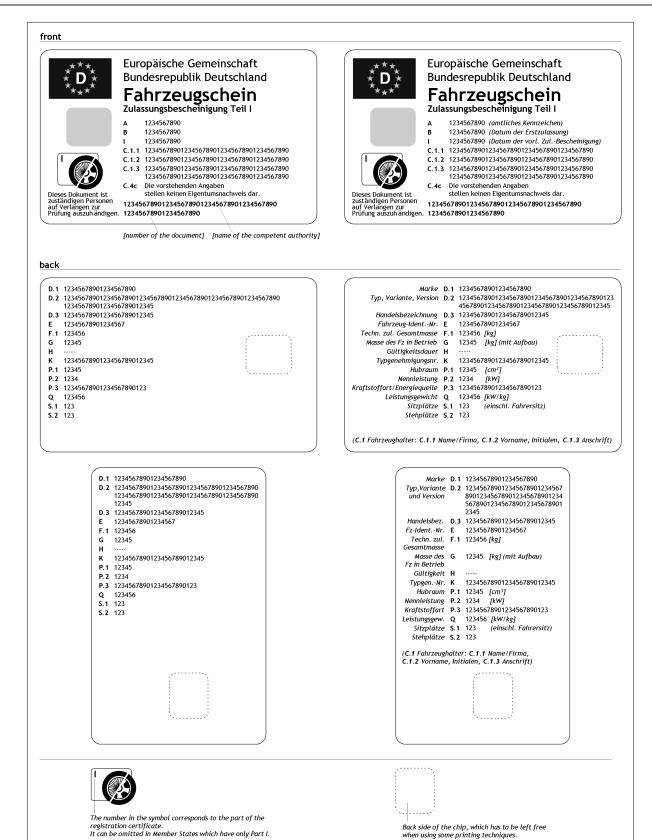
front

Europäische Gemeinschaft
Bundesrepublik Deutschland
Fahrzeugschein
Zulassungsbescheinigung Teil I

A   1234567890
B   1234567890
I   1234567890
C.1.1   123456789012345678901234567890123456789
C.1.2   123456789012345678901234567890123456789
C.1.3   123456789012345678901234567890123456789
         123456789012345678901234567890123456789
C.4c   Die vorstehenden Angaben
        stellen keinen Eigentumsnachweis dar.

Dieses Dokument ist
zuständigen Personen
auf Verlangen zur
Prüfung auszuh ändigen.

1234567890123456789012345678901234567890
12345678901234567890

[number of the document]   [name of the competent authority]

Europäische Gemeinschaft
Bundesrepublik Deutschland
Fahrzeugschein
Zulassungsbescheinigung Teil I

A   1234567890   (amtliches Kennzeichen)
B   1234567890   (Datum der Erstzulassung)
I   1234567890   (Datum der vorl. Zul.-Bescheinigung)
C.1.1   123456789012345678901234567890123456789
C.1.2   123456789012345678901234567890123456789
C.1.3   123456789012345678901234567890123456789
         123456789012345678901234567890123456789
C.4c   Die vorstehenden Angaben
        stellen keinen Eigentumsnachweis dar.

Dieses Dokument ist
zuständigen Personen
auf Verlangen zur
Prüfung auszuh ändigen.

1234567890123456789012345678901234567890
12345678901234567890

back

D.1   12345678901234567890
D.2   1234567890123456789012345678901234567890123456789012345678901234567890
      123456789012345678901234567890012345
D.3   123456789012345678901234567890012345
E   12345678901234567
F.1   123456
G   12345
H   -----
K   123456789012345678901234567890012345
P.1   12345
P.2   1234
P.3   1234567890123456789012345678901234567890123
Q   123456
S.1   123
S.2   123

Marke   **D.1**   12345678901234567890
Typ, Variante, Version   **D.2**   1234567890123456789012345678901234567890123
                          456789012345678901234567890123456789012345
Handelsbezeichnung   **D.3**   123456789012345678901234567890012345
Fahrzeug-Ident.-Nr.   **E**   12345678901234567
Techn. zul. Gesamtmasse   **F.1**   123456   *[kg]*
Masse des Fz in Betrieb   **G**   12345   *[kg] (mit Aufbau)*
Gültigkeitsdauer   **H**   -----
Typgenehmigungsnr.   **K**   123456789012345678901234567890012345
Hubraum   **P.1**   12345   *[cm³]*
Nennleistung   **P.2**   1234   *[kW]*
Kraftstoffart/Energiequelle   **P.3**   1234567890123456789012345678901234567890123
Leistungsgewicht   **Q**   123456   *[kW/kg]*
Sitzplätze   **S.1**   123   *(einschl. Fahrersitz)*
Stehplätze   **S.2**   123

*(**C.1** Fahrzeughalter: **C.1.1** Name/Firma, **C.1.2** Vorname, Initialen, **C.1.3** Anschrift)*

D.1   12345678901234567890
D.2   1234567890123456789012345678901234567890
      1234567890123456789012345678901234567890
      12345
D.3   123456789012345678901234567890012345
E   12345678901234567
F.1   123456
G   12345
H   -----
K   123456789012345678901234567890012345
P.1   12345
P.2   1234
P.3   1234567890123456789012345678901234567890123
Q   123456
S.1   123
S.2   123

Marke   **D.1**   12345678901234567890
Typ, Variante und Version   **D.2**   123456789012345678901234567
                 89012345678901234567890123
                 567890123456789012345678901
                 2345
Handelsbez.   **D.3**   123456789012345678901234567890012345
Fz-Ident.-Nr.   **E**   12345678901234567
Techn. zul. Gesamtmasse   **F.1**   123456 *[kg]*
Masse des Fz in Betrieb   **G**   12345   *[kg] (mit Aufbau)*
Gültigkeit   **H**   -----
Typgen.-Nr.   **K**   123456789012345678901234567890012345
Hubraum   **P.1**   12345   *[cm³]*
Nennleistung   **P.2**   1234   *[kW]*
Kraftstoffart   **P.3**   1234567890123456789012345678901234567890123
Leistungsgew.   **Q**   123456   *[kW/kg]*
Sitzplätze   **S.1**   123   *(einschl. Fahrersitz)*
Stehplätze   **S.2**   123

*(**C.1** Fahrzeughalter: **C.1.1** Name/Firma, **C.1.2** Vorname, Initialen, **C.1.3** Anschrift)*

The number in the symbol corresponds to the part of the registration certificate.
It can be omitted in Member States which have only Part I.

Back side of the chip, which has to be left free when using some printing techniques.

Figure 1: Examples of possible lay-outs of the mandatory data
(more optional and additional data may be added to the back side of the card)

III.2. *Data storage and protection*

Preceded by the harmonised common codes (where appropriate, in connection with the individual codes of the Member States according to Chapter II.7), the following data shall or may be additionally stored on the card surface bearing the legible information as per Chapter III.1:

(A) Data as per Chapters II.4 and II.5

All data specified in Chapters II.4 and II.5 shall be mandatorily stored on the card.

(B) Other data as per Chapter II.6

Moreover, the Member States are free to store more data as per Chapter II.6, to the necessary extent.

(C) Other data as per Chapter II.7

Optionally, additional information may be stored on the card.

The data from the letters A and B is stored in two corresponding files with transparent structure (see ISO/IEC 7816-4). The Member States may specify the storage of data from Letter C according to their requirements.

There are no read restrictions on these files.

Write access to these files shall be restricted to the national competent authorities (and their authorised agencies) in the Member State issuing the smart card.

Write access is permitted only after an asymmetric authentication with session key exchange for protecting the session between the vehicle registration card and a security module (e.g. a security module card) of the national competent authorities (or their authorised agencies). Thereby card verifiable certificates according to ISO/IEC 7816-8 are exchanged before the authentication process. The card verifiable certificates contain the corresponding public keys to be retrieved and to be used in the following authentication process. These certificates are signed by the national competent authorities and contain an authorisation object (certificate holder authorisation) according to ISO/IEC 7816-9 in order to encode role specific authorisation to the card. This role authorisation is related to the national competent authority (e.g. to update a data field).

The corresponding public keys of the national competent authority are stored as trust anchor (root public key) in the card.

The specification of the files and commands needed for the authentication process and the writing process is under the responsibility of the Member States. The security assurance has to be approved by common criteria evaluation according to EAL4+. The augmentations are as follows: 1. AVA_MSU.3 Analysis and testing for insecure states; 2. AVA_VLA.4 Highly resistant.

(D) Verification data for authenticity of registration data

The issuing authority calculates its electronic signature about the complete data of a file containing the data of the letter A or B and stores it in a related file. These signatures allow the authenticity of the stored data to be verified. The cards shall store the following data:

— electronic signature of registration data related to letter A,

— electronic signature of registration data related to letter B,

For verification of these electronic signatures the card shall store:

— certificates of the issuing authority calculating the signatures about the data of letters A, B.

Electronic signatures and the certificates shall be readable without restriction. Write access to electronic signatures and certificates shall be restricted to the national competent authorities.

III.3. *Interface*

External contacts should be used for interfacing. A combination of external contacts with a transponder is optional.

III.4. *Storage capacity of the card*

The card shall have sufficient capacity to store the data mentioned in Chapter III.2.

III.5.   *Standards*

The chip card and reading devices used shall comply with the following standards:

— ISO 7810:   Standards for identification cards (plastic cards): Physical characteristics

— ISO 7816-1 and −2:   Physical characteristics of chip cards, dimensions and location of contacts

— ISO 7816-3:   Electrical characteristics of contacts, transmission protocols

— ISO 7816-4:   Communication contents, chip card data structure, safety architecture, access mechanisms

— ISO 7816-5:   Structure of application identifiers, selection and execution of application identifiers, registration procedure for application identifiers (numbering system)

— ISO 7816-6:   Inter-industry data elements for interchange

— ISO 7816-8:   Integrated circuit(s) cards with contacts — Security related inter-industry commands

— ISO 7816-9:   Integrated circuit(s) cards with contacts — Enhanced inter-industry commands

III.6.   *Technical Characteristics and Transmission Protocols*

The format shall be ID-1 (normal size, see ISO/IEC 7810).

The card shall support transmission protocol T=1 in compliance with ISO/IEC 7816-3. Additionally other transmission protocols may be supported, e.g. T=0, USB or contactless protocols.

For bit transmission the "direct convention" shall be applied (see ISO/IEC 7816-3).

(A) Supply voltage, programming voltage

The card shall work with Vcc = 3V (+/0.3V) or with Vcc = 5V (+/0,5V). The card shall not require a programming voltage at pin C6.

(B) Answer to reset

The Information Field Size Card byte shall be presented at the ATR in character TA3. This value shall be at least "80h" (=128 bytes).

(C) Protocol parameter selection

The support of Protocol parameter selection (PPS) according to ISO/IEC 7816-3 is mandatory. It is used for selecting T=1, if T=0 is additionally present in the card, and to negotiate the Fi/Di parameters for achieving higher transmission rates.

(D) Transmission protocol T = 1

The support of chaining is mandatory.

The following simplifications are allowed:

— NAD Byte: not used (NAD should be set to "00"),

— S-Block ABORT: not used,

— S-Block VPP state error: not used.

The information field size device (IFSD) shall be indicated from the IFD immediately after ATR, i.e. the IFD shall transmit the S-Block IFS Request after ATR and the card shall send back S-Block IFS. The recommended value for IFSD is 254 bytes.

III.7.   *Temperature range*

The registration certificate in smart card format shall properly function under all climatic conditions usually prevailing in the territories of the community and at least in the temperature range specified in ISO 7810. The cards shall be capable of operating correctly in the humidity range 10 % to 90 %.

III.8. *Physical lifetime*

If used in accordance with the environmental and electricity-related specifications, the card must function properly for a period of ten years. The material of the card must be chosen in such a way that this lifetime is ensured.

III.9. *Electrical characteristics*

During operation, the cards shall conform to Commission Directive 95/54/EC of 31 October 1995 ([1]), related to electromagnetic compatibility, and shall be protected against electrostatic discharges.

III.10. *File structure*

Table 1 lists the mandatory elementary files (EF) of the application DF (see ISO/IEC 7816-4) DF.Registration. All these files have a transparent structure. The access requirements are described in Chapter III.2. The file sizes are specified by the Member States according their requirements.

Table 1

Filename	File Identifier	Description
EF.Registration_A	"D001"	Registration data according to the Chapters II.4 and II.5
EF.Signature_A	"E001"	Electronic Signature about complete data content of EF.Registration_A
EF.C.IA_A.DS	"C001"	X.509v3 Certificate of the issuing authority calculating the signatures for EF.Signature_A
EF.Registration_B	"D011"	Registration data according Chapter II.6
EF.Signature_B	"E011"	Electronic Signature about complete data content of EF.Registration_B
EF.C.IA_B.DS	"C011"	X.509v3 Certificate of the issuing authority calculating the signatures for EF.Signature_B

III.11. *Data structure*

The stored certificates are in the X.509v3 format according ISO/IEC 9594-8. The electronic signatures are stored transparently.

The registration data is stored as BER-TLV data objects (see ISO/IEC 7816-4) in the corresponding elementary files. The value fields are coded as ASCII character as defined by ISO/IEC 8824-1, the values "C0"-"FF" are defined by ISO/IEC 8859-1 (Latin1 character set), ISO/IEC 8859-7 (Greek character set) or ISO/IEC 8859-5 (Cyrillic character set). The format of dates is YYYYMMDD.

Table 2 lists the Tags identifying the data objects corresponding to the registration data of the Chapters II.4 and II.5 together with additional data from Chapter III.1. Unless otherwise stated, the data objects listed in Table 2 are mandatory. Optional data objects may be omitted. The column of the Tag indicates the level of nesting.

Table 2

Tag				Description
"78"				Compatible tag allocation authority, nesting object "4F" (see ISO/IEC 7816-4 and ISO/IEC 7816-6)
	"4F"			Application identifier (see ISO/IEC 7816-4)
"71"				Inter-industry template (see ISO/IEC 7816-4 and ISO/IEC 7816-6) corresponding to mandatory data of the registration certificate Part 1, nesting all following objects

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([1]) Commission Directive 95/54/EC of 31 October 1995 adapting to technical progress Council Directive 72/245/EEC on the approximation of the laws of the Member States relating to the suppression of radio interference produced by spark-ignition engines fitted to motor vehicles and amending Directive 70/156/EEC on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers (OJ L 266, 8.11.1995 p. 1).

Tag			Description
"80"			Version of Tag definition
"9F33"			Name of the Member State issuing the registration certificate Part 1
"9F34"			Another (e.g. previous national) designation of the equivalent document (optional)
"9F35"			Name of the competent authority
"9F36"			Name of the authority issuing the registration certificate (optional)
"9F37"			Character set used: "00": ISO/IEC 8859-1 (Latin1 character set) "01": ISO/IEC 8859-5 (Cyrillic character set) "02": ISO/IEC 8859-7 (Greek character set)
"9F38"			Unambiguous consecutive number of the document as used within the Member State
"81"			Registration number
"82"			Date of first registration
"A1"			Personal data, nesting objects "A2" and "86"
	"A2"		Holder of the registration certificate, nesting objects "83", "84" and "85"
		"83"	Surname or business name
		"84"	Other names or initials (optional)
		"85"	Address in the Member State
	"86"		"00": is the vehicle owner "01": is not the vehicle owner "02": is not identified as the vehicle owner
"A3"			Vehicle, nesting objects "87", "88" and "89"
	"87"		Vehicle make
	"88"		Vehicle type
	"89"		Vehicle commercial descriptions
"8A"			Vehicle identification number
"A4"			Mass nesting "8B"
	"8B"		Mass maximum technically permissible laden mass
"8C"			Mass of the vehicle in service with bodywork
"8D"			Period of validity
"8E"			Date of the registration to which this certificate refers
"8F"			Type approval number
"A5"			Engine, nesting objects "90", "91", and "92"
	"90"		Engine capacity
	"91"		Engine maximum net power

Tag			Description
		"92"	Engine type of fuel
	"93"		Power weight ratio
	"A6"		Seating capacity nesting objects "94" and "95"
		"94"	Number of seats
		"95"	Number of standing places

Table 3 lists the Tags identifying the data objects corresponding to the registration data of Chapter II.6. The data objects listed in Table 3 are optional.

Table 3

Tag			Description
"78"			Compatible tag allocation authority, nesting object "4F" (see ISO/IEC 7816-4 and ISO/IEC 7816-6)
	"4F"		Application Identifier (see ISO/IEC 7816-4)
"72"			Inter-industry template (see ISO/IEC 7816-4 and ISO/IEC 7816-6) corresponding to optional data of the registration certificate Part 1, Chapter II.6, nesting all following objects
	"80"		Version of Tag definition
	"A1"		Personal data nesting objects "A7", "A8" and "A9"
		"A7"	Vehicle owner, nesting objects "83", "84" and "85"
		..	
		"A8"	Second vehicle owner, nesting objects "83", "84" and "85"
		..	
		"A9"	Person who may use the vehicle by virtue of legal right other than ownership nesting objects "83", "84", and "85"
		..	
	"A4"		Mass, nesting "96" and "97"
		"96"	Maximum permissible laden mass of the vehicle in service
		"97"	Maximum permissible laden mass of the whole vehicle in service
	"98"		Vehicle category
	"99"		Number of axles
	"9A"		Wheelbase
	"AD"		Distribution of the maximum permissible laden mass among the axles, nesting objects "9F1F", "9F20", "9F21", "9F22" and "9F23"
		"9F1F"	Axle 1

Tag			Description
		"9F20"	Axle 2
		"9F21"	Axle 3
		"9F22"	Axle 4
		"9F23"	Axle 5
	"AE"		Technically permissible maximum towable mass of the trailer, nesting objects "9B" and "9C"
		"9B"	Braked
		"9C"	Unbraked
	"A5"		Engine, nesting objects "9D" and "9E"
		"9D"	Rated speed
		"9E"	Engine identification number
"9F24"			Colour of the vehicle
"9F25"			Maximum speed
"AF"			Sound level, nesting objects "DF26", "DF27" and "DF28"
		"9F26"	Stationary
		"9F27"	Engine speed
		"9F28"	Drive by
	"B0"		Exhaust emissions, nesting objects "9F29", "9F2A", "9F2B", "9F2C", "9F2D", "9F2E", "9F2F", "9F30" and "9F31"
		"9F29"	CO
		"9F2-A"	HC
		"9F2B"	NO_X
		"9F2C"	$HC+NO_X$
		"9F2-D"	Particulates of diesel
		"9F2E"	Corrected absorption coefficient for diesel
		"9F2F"	CO_2
		"9F30"	Combined fuel consumption
		"9F31"	Indication of the environmental category of EC type-approval
	"9F32"		Fuel tanks capacity

Structure and format of the data according Chapter II.7 are specified by the Member States.

III.12. *Reading the registration data*

A. Application selection

The application "Vehicle Registration" shall be selectable by a SELECT DF (by name, see ISO/IEC 7816-4) with its application identifier (AID). The AID value is requested from a laboratory selected by the European Commission.

B. Reading data from files

The files corresponding to Chapter II, Letters A, B and D, shall be selectable by SELECT (see ISO/IEC 7816-4) with the command parameters P1 set to "02", P2 set to "04" and the command data field containing the file identifier (see Chapter X, Table 1). The returned FCP template contains the file size which can be useful for reading these files.

These files shall be readable with READ BINARY (see ISO/IEC 7816-4) with an absent command data field and L_e set to the length of the expected data, using a short L_e.

C. Verification of data authenticity

To verify the authenticity of the stored registration data, the corresponding electronic signature may be verified. This means that besides the registration data also the corresponding electronic signature may be read from the registration card.

The public key for signature verification can be retrieved by reading the corresponding issuing authority certificate from the registration card. Certificates contain the public key and the identity of the corresponding authority. The signature verification may be performed by another system than the registration card.

The Member States are free to retrieve the public keys and certificates for verifying the issuing authority certificate.

III.13. *Special provisions*

Irrespective of the other provisions herein, the Member States, after notifying the European Commission, may add colours, marks or symbols. In addition, for certain data of Chapter III.2 Letter C, the Member States may allow XML format and may allow access via TCP/IP.

Member States may, with the agreement of the European Commission, add other applications for which no harmonised rules or documents exist yet at EU level (e.g. roadworthiness certificate), on the vehicle registration card to realise additional vehicle related services.

ANNEX II

PART II OF THE REGISTRATION CERTIFICATE (¹)

I.   This part may be implemented in either of two formats: as a paper document or as a smart card. The characteristics of the paper document version are specified in Chapter II and those of the smart card version in Chapter III.

II.   **Specifications of Part II of the registration certificate in paper format**

II.1.   The overall dimensions of the registration certificate shall not be greater than an A4 format (210 × 297 mm) or a folder of A4 format.

II.2.   The paper used for part II of the registration certificate shall be made secure against forgery by using at least two of the following techniques:

— graphics,

— watermark,

— fluorescent fibres, or

— fluorescent imprints.

Member States are free to introduce additional security features.

II.3.   Part II of the registration certificate may consist of several pages. Member States shall determine the number of pages in accordance with the information contained in the document and its layout.

II.4.   The first page of Part II of the registration certificate shall contain

— the name of the Member State issuing Part II of the registration certificate,

— the distinguishing mark of the Member State issuing Part II of the registration certificate, namely:

B   Belgium

DK   Denmark

D   Germany

GR   Greece

E   Spain

F   France

IRL Ireland

I   Italy

L   Luxembourg

NL   Netherlands

A   Austria

P   Portugal

FIN Finland

S   Sweden

UK   United Kingdom,

— the name of the competent authority,

— the words "Part II of the Registration Certificate", printed in large type in the language or languages of the Member States issuing the registration certificate; they shall also appear, after a suitable space, in small type, in the other languages of the European Community,

— the words "European Community", printed in the language or languages of the Member State issuing Part II of the registration certificate,

— the number of the document.

_____
(¹) This Annex is concerned only with Registration Certificates consisting of Parts I and II.

II.5. Part II of the Registration Certificate shall also contain the following data, preceded by the corresponding harmonised Community codes:

(A) registration number

(B) date of the first registration of the vehicle

(D) vehicle:

(D.1) make,

(D.2) type,

— variant (if available)

— version (if available)

(D.3) commercial description(s)

(E) vehicle identification number

(K) type-approval number (if available)

II.6. Part II of the registration certificate may, moreover, contain the following data, preceded by the corresponding harmonised Community codes:

(C) personal data

(C.2) owner of the vehicle,

(C.2.1) surname(s) or business name,

(C.2.2) other name(s) or initial(s) (where appropriate),

(C.2.3) address in the Member State of registration, on the date of issue of the document,

(C.3) natural or legal person who may use the vehicle by virtue of a legal right other than that of ownership,

(C.3.1) surname(s) or business name,

(C.3.2) other name(s) or initial(s) (where appropriate),

(C.3.3) address in the Member State of registration, on the date of issue of the document

(C.5), (C.6) where a change in the personal data given in point II.6, code C.2 and/or point II.6, code C.3 does not give rise to the issue of a new Part II of the Registration Certificate, the new personal data corresponding to these points may be included under codes (C.5) or (C.6); they are broken down in accordance with point II.6, code C.2 and point II.6, code C.3.

(J) vehicle category.

II.7. Member States may include additional information in Part II of the registration certificate; in particular, they may add between brackets to the identification codes, as laid down under points II.5 and II.6, additional national codes.

III. **Specifications of Part II of the Registration Certificate in smart card format** (Alternative to the specimen in paper format described in Chapter II)

III.1. *Card format and data legible with the eye*

Being a microprocessor card, the chip card shall be designed in accordance with the standards mentioned in Chapter III.5.

Printed on the front and back of the card shall be at least the data specified in Chapters II.4 and II.5; these data shall be legible with the eye (minimum character height: 6 points) and printed on as follows. (Examples of possible lay-outs are presented in Figure 2 at the end of this section)

A. Basic imprint

The basic data shall contain the following:

Front

(a) To the right of the chip location:

in the language(s) of the Member State issuing the Registration Certificate

— the words "European Community",

— the name of the Member State issuing the Registration Certificate,

— the words "Part II of the Registration Certificate" printed in large type,

— another (e.g. previous national) designation of the equivalent document (optional),

— the name of the competent authority (alternatively, also in the form of a personalisation imprint as per Letter B),

— the unambiguous consecutive number of the document as used within the Member State (alternatively, also in the form of a personalisation imprint as per Letter B).

(b) Above the chip location:

the distinguishing mark of the Member State issuing the Registration Certificate, white in a blue rectangle and surrounded by twelve yellow stars:

B   Belgium

DK   Denmark

D   Germany

GR   Greece

E   Spain

F   France

IRL Ireland

I   Italy

L   Luxembourg

NL   The Netherlands

A   Austria

P   Portugal

FIN Finland

S   Sweden

UK   United Kingdom

(c) Member States might consider adding, at the lower edge in small type and in their national language(s), the note: "This document should be kept in a safe place outside the vehicle."

(d) The basic colour of the card is red (Pantone 194); alternatively, a red-to-white transition is possible.

(e) A symbol representing a wheel (see proposed lay-out) shall be printed within the printing area in the bottom left corner of the card front.

In other respects, the provisions of Chapter III.13 shall apply.

B. Personalisation imprint

The personalisation imprint shall contain the following information:

Front

(a) the name of the competent authority — see also Letter Aa).

(b) the name of the authority issuing the Registration Certificate (optional).

(c) the unambiguous consecutive number of the document as used within the Member State — see also Letter Aa).

(d) The following data from Chapter II.5; according to Chapter II.7, individual national codes may be added to the preceding harmonised Community codes.

Code	*Reference*
A	registration number (official licence number)
B	date of first registration of the vehicle

Back

The back shall bear at least the remaining data specified in Chapter II.5; according to Chapter II.7, individual national codes may be added to the preceding harmonised community codes.

In detail, these data are:

Code	*Reference*

Vehicle data (in consideration of the notes in Chapter II.5)

D.1	make
D.2	type (variant/version, where appropriate)
D.3	commercial description(s)
E	vehicle identification number
K	type-approval number (if available)

Optionally, additional data from II.6 (with the harmonised codes) and II.7 may be added on the back of the card.

C. Physical security features of the smart card

The threats to the physical security of documents are:

— Production of false cards: creating a new object which bears great resemblance to the document, either by making it from scratch or by copying an original document.

— Material alteration: changing a property of an original document, e.g. modifying some of the data printed on the document.

The material used for Part II of the registration certificate shall be made secure against forgery by using at least three of the following techniques:

— microprinting,

— guilloche printing*,

— iridescent printing,

— laser engraving,

— ultraviolet fluorescent ink,

— inks with viewing angle — dependent colour*,

— inks with temperature — dependent colour*,

— custom holograms*,

— variable laser images,

— optical variable images.

Member States are free to introduce additional security features.

As a basis, the techniques indicated with an asterisk are to be preferred as they enable the law enforcement officers to check the validity of the card without any special means.
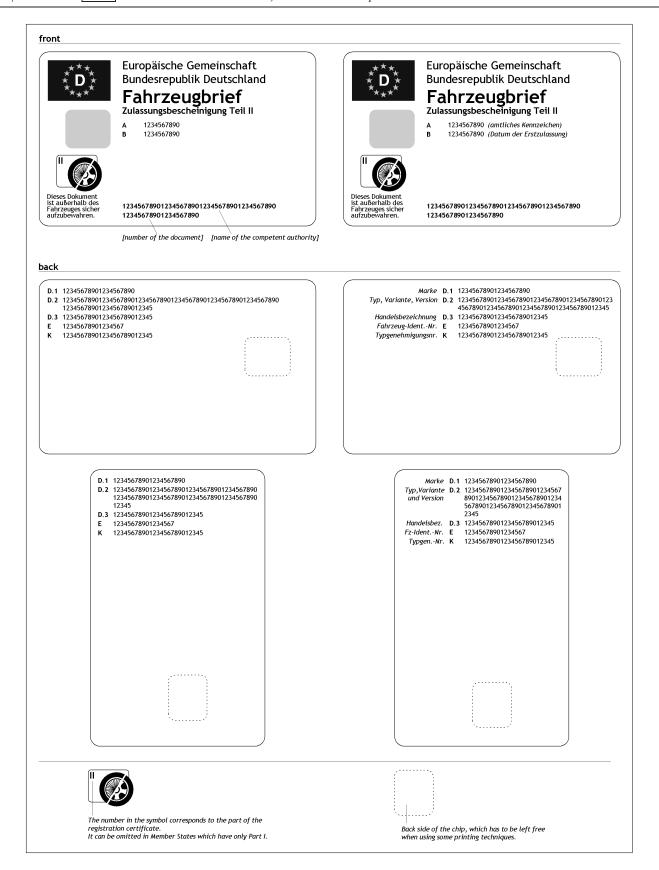
front

Europäische Gemeinschaft
Bundesrepublik Deutschland

Fahrzeugbrief
Zulassungsbescheinigung Teil II

A 1234567890
B 1234567890

Dieses Dokument
ist außerhalb des
Fahrzeuges sicher
aufzubewahren.

12345678901234567890123456789012345678 90
12345678901234567890

[number of the document]   [name of the competent authority]

Europäische Gemeinschaft
Bundesrepublik Deutschland

Fahrzeugbrief
Zulassungsbescheinigung Teil II

A 1234567890 *(amtliches Kennzeichen)*
B 1234567890 *(Datum der Erstzulassung)*

Dieses Dokument
ist außerhalb des
Fahrzeuges sicher
aufzubewahren.

12345678901234567890123456789012345678 90
12345678901234567890

back

D.1 12345678901234567890
D.2 123456789012345678901234567890123456789012345678901234567890
    1234567890123456789012345
D.3 1234567890123456789012345
E 12345678901234567
K 1234567890123456789012345

Marke D.1 12345678901234567890
Typ, Variante, Version D.2 1234567890123456789012345678901234567890123
    456789012345678901234567890123456789012345
Handelsbezeichnung D.3 1234567890123456789012345
Fahrzeug-Ident.-Nr. E 12345678901234567
Typgenehmigungsnr. K 1234567890123456789012345

D.1 12345678901234567890
D.2 12345678901234567890123456789012345678901234567890
    12345678901234567890123456789012345678901234567890
    12345
D.3 1234567890123456789012345
E 12345678901234567
K 1234567890123456789012345

Marke D.1 12345678901234567890
Typ, Variante D.2 1234567890123456789012345678901234567
und Version   89012345678901234567890123456789012345
    678901234567890123456789012345678901
    2345
Handelsbez. D.3 1234567890123456789012345
Fz-Ident.-Nr. E 12345678901234567
Typgen.-Nr. K 1234567890123456789012345

*The number in the symbol corresponds to the part of the
registration certificate.
It can be omitted in Member States which have only Part I.*

*Back side of the chip, which has to be left free
when using some printing techniques.*

Figure 2: Examples of possible lay-outs of the mandatory data
(more optional and additional data may be added to the back side of the card)

III.2. *Data storage and protection*

Preceded by the harmonised common codes (where appropriate, in connection with the individual codes of the Member States according to Chapter II.7), the following data shall or may be additionally stored on the card surface bearing the legible information as per Chapter III.1:

(A) Data as per Chapters II.4 and II.5

All data specified in Chapters II.4 and II.5 shall be mandatorily stored on the card.

(B) Other data as per Chapter II.6

Moreover, the Member States are free to store more data as per Chapter II.6, to the necessary extent.

(C) Other data as per Chapter II.7

Optionally, further vehicle-related data of general interest may be stored on the card.

The data from the Letters A and B is stored in two corresponding files with transparent structure (see ISO/IEC 7816-4). The Member States may specify the storage of data from Letter C according their requirements.

There are no read restrictions on these files.

Write access to these files shall be restricted to the national competent authorities (and their authorised Agencies) in the Member State issuing the smart card.

Write access is permitted only after an asymmetric authentication with session key exchange for protecting the session between the vehicle registration card and a Security Module (e.g. a Security Module Card) of the national competent authorities (or their authorised Agencies). Thereby Card Verifiable certificates according to ISO/IEC 7816-8 are exchanged before the authentication process. The Card Verifiable certificates contain the corresponding public keys to be retrieved and to be used in the following authentication process. These certificates are signed by the national competent authorities and contain an authorisation object (certificate holder authorisation) according to ISO/IEC 7816-9 in order to encode role specific authorisation to the card. This role authorisation is related to the national competent authority (e.g. to update a data field).

The corresponding public keys of the national competent authority are stored as trust anchor (root public key) in the card.

The specification of the files and commands needed for the authentication process and the writing process is under responsibility of the Member States. The security assurance has to be approved by Common Criteria Evaluation according to EAL4+. The augmentations are as follows: 1. AVA_MSU.3 Analysis and testing for insecure states; 2. AVA_VLA.4 Highly resistant.

(D) Verification data for authenticity of registration data

The issuing authority calculates its electronic signature about the complete data of a file containing the data of the Letter A or B and stores it in a related file. These signatures allow the authenticity of the stored data to be verified. The cards shall store the following data:

— electronic signature of registration data related to Letter A,

— electronic signature of registration data related to Letter B.

For verification of these electronic signatures the card shall store:

— certificates of the issuing authority calculating the signatures about the data of Letters A, B.

Electronic signatures and the certificates shall be readable without restriction. Write access to electronic signatures and certificates shall be restricted to the national competent authorities.

III.3. *Interface*

External contacts should be used for interfacing. A combination of external contacts with a transponder is optional.

III.4. *Storage capacity of the card*

The card shall have sufficient capacity to store the data mentioned in Chapter III.2.

III.5. *Standards*

The chip card and reading devices used shall comply with the following standards:

— ISO 7810:   Standards for identification cards (plastic cards): Physical characteristics,

— ISO 7816-1 and — 2:   Physical characteristics of chip cards, dimensions and location of contacts,

— ISO 7816-3:   Electrical characteristics of contacts, transmission protocols,

— ISO 7816-4:   Communication contents, chip card data structure, safety architecture, access mechanisms,

— ISO 7816-5:   Structure of application identifiers, selection and execution of application identifiers, registration procedure for application identifiers (numbering system),

— ISO 7816-6:   Inter-industry data elements for interchange,

— ISO 7816-8:   Integrated circuit(s) cards with contacts — Security related inter-industry commands,

— ISO 7816-9:   Integrated circuit(s) cards with contacts — Enhanced inter-industry commands,

III.6. *Technical characteristics and transmission protocols*

The format shall be ID-1 (normal size, see ISO/IEC 7810).

The card shall support transmission protocol T = 1 in compliance with ISO/IEC 7816-3. Additionally other transmission protocols may be supported, e.g. T=0, USB or contactless protocols. For bit transmission the "direct convention" shall be applied (see ISO/IEC 7816-3).

A. Supply voltage, programming voltage

The card shall work with Vcc = 3V (+/0.3V) or with Vcc = 5V (+/0.5V). The card shall not require a programming voltage at pin C6.

B. Answer to reset

The Information Field Size Card byte shall be presented at the ATR in character TA3. This value shall be at least "80h" (=128 bytes).

C. Protocol parameter selection

The support of protocol parameter selection (PPS) according to ISO/IEC 7816-3 is mandatory. It is used for selecting T=1, if T=0 is additionally present in the card, and to negotiate the Fi/Di parameters for achieving higher transmission rates.

D. Transmission protocol T = 1

The support of chaining is mandatory.

The following simplifications are allowed:

— NAD Byte: not used (NAD should be set to "00"),

— S-Block ABORT: not used,

— S-Block VPP state error: not used.

The information field size device (IFSD) shall be indicated from the IFD immediately after ATR, i.e. the IFD shall transmit the S-block IFS request after ATR and the card shall send back S-block IFS. The recommended value for IFSD is 254 bytes.

III.7. *Temperature range*

The registration certificate in smart card format shall properly function under all climatic conditions usually prevailing in the territories of the community and at least in the temperature range specified in ISO 7810. The cards shall be capable of operating correctly in the humidity range 10 % to 90 %.

III.8. *Physical lifetime*

If used in accordance with the environmental and electricity-related specifications, the card must function properly for a period of ten years. The material of the card must be chosen in such a way that this lifetime is ensured.

III.9. *Electrical characteristics*

During operation, the cards shall conform to Directive 95/54/EC, related to electromagnetic compatibility, and shall be protected against electrostatic discharges.

III.10. *File structure*

Table 1 lists the mandatory elementary files (EF) of the application DF (see ISO/IEC 7816-4) DF.Registration. All these files have a transparent structure. The access requirements are described in Chapter III.2. The file sizes are specified by the Member States according their requirements.

Table 4

Filename	File Identifier	Description
EF.Registration_A	"D001"	Registration data according to the Chapters II.4 and II.5
EF.Signature_A	"E001"	Electronic Signature about complete data content of EF.Registration_A
EF.C.IA_A.DS	"C001"	X.509v3 Certificate of the issuing authority calculating the signatures for EF.Signature_A
EF.Registration_B	"D011"	Registration data according Chapter II.6
EF.Signature_B	"E011"	Electronic Signature about complete data content of EF.Registration_B
EF.C.IA_B.DS	"C011"	X.509v3 Certificate of the issuing authority calculating the signatures for EF.Signature_B

III.11. *Data structure*

The stored certificates are in the X.509v3 format according ISO/IEC 9594-8.

The electronic signatures are stored transparent.

The registration data is stored as BER-TLV data objects (see ISO/IEC 7816-4) in the corresponding elementary files. The value fields are coded as ASCII character as defined by ISO/IEC 8824-1, the values "C0"-"FF" are defined by ISO/IEC 8859-1 (Latin1 character set) or ISO/IEC 8859-7 (Greek character set) or ISO/IEC 8859-5 (Cyrillic character set). The format of dates is YYYYMMDD.

Table 2 lists the Tags identifying the data objects corresponding to the registration data of Chapter II.4 and II.5 together with additional data from Chapter III.1. Unless otherwise stated, the data objects listed in Table 2 are mandatory. Optional data objects may be omitted. The column of the Tag indicates the level of nesting.

Table 5

Tag				Description
"78"				Compatible tag allocation authority, nesting object "4F" (see ISO/IEC 7816-4 and ISO/IEC 7816-6)
	"4F"			Application identifier (see ISO/IEC 7816-4)
"73"				Inter-industry template (see ISO/IEC 7816-4 and ISO/IEC 7816-6) corresponding to mandatory data of the registration certificate Part 2, nesting all following objects
	"80"			Version of tag definition

Tag			Description
"9F33"			Name of the Member State issuing the registration certificate Part 2
"9F34"			Another (e.g. previous national) designation of the equivalent document (optional)
"9F35"			Name of the competent authority
"9F36"			Name of the authority issuing the registration certificate (optional)
"9F37"			Character set used: "00": ISO/IEC 8859-1 (Latin1 character set) "01": ISO/IEC 8859-5 (Cyrillic character set) "02": ISO/IEC 8859-7 (Greek character set)
"9F38"			Unambiguous consecutive number of the document as used within the Member State
"81"			Registration number
"82"			Date of first registration
"A3"			Vehicle, nesting objects "87", "88" and "89"
	"87"		Vehicle make
	"88"		Vehicle type
	"89"		Vehicle commercial descriptions
"8A"			Vehicle identification number
"8F"			Type approval number

Table 6 lists the Tags identifying the data objects corresponding to the registration data of Chapter II.6. The data objects listed in Table 6 are optional.

Table 6

Tag				Description
"78"				Compatible tag allocation authority, nesting object "4F" (see ISO/IEC 7816-4 and ISO/IEC 7816-6)
	"4F"			Application identifier (see ISO/IEC 7816-4)
"74"				Inter-industry template (see ISO/IEC 7816-4 and ISO/IEC 7816-6) corresponding to optional data of the registration certificate Part 1, Chapter II.6, nesting all following objects
	"80"			Version of tag definition
	"A1"			Personal data nesting objects "A7", "A8" and "A9"
		"A7"		Vehicle owner nesting objects "83", "84" and "85"
			"83"	Surname or business name
			"84"	Other names or initials (optional)
			"85"	Address in the Member State
		"A8"		Second vehicle owner nesting objects "83", "84" and "85"
			...	

Tag			Description
		"A9"	Person who may use the vehicle by virtue of legal right other than ownership nesting objects "83", "84", and "85"
		...	
	"98"		Vehicle category

Structure and format of the data according Chapter II.7 are specified by the Member States.

III.12. *Reading the registration data*

A. Application selection

The Application "Vehicle Registration" shall be selectable by a SELECT DF (by name, see ISO/IEC 7816-4) with its Application identifier (AID). The AID value is requested from a laboratory selected by the European Commission.

B. Reading data from files

The files corresponding to Chapter II, letters A, B and D, shall be selectable by SELECT (see ISO/IEC 7816-4) with the command parameters P1 set to "02", P2 set to "04" and the command data field containing the file identifier (see Chapter X, Table 1). The returned FCP template contains the file size which can be useful for reading these files.

These files shall be readable with READ BINARY (see ISO/IEC 7816-4) with an absent command data field and L_e set to the length of the expected data, using a short L_e.

C. Verification of data authenticity

To verify the authenticity of the stored registration data, the corresponding electronic signature may be verified. This means that besides the registration data also the corresponding electronic signature may be read from the registration card.

The public key for signature verification can be retrieved by reading the corresponding issuing authority certificate from the registration card. Certificates contain the public key and the identity of the corresponding authority. The signature verification may be performed by another system than the registration card.

The Member States are free in retrieving the public keys and certificates for verifying the issuing authority certificate.

III.13. *Special provisions*

Irrespective of the other provisions herein, the Member States, after notifying the European Commission, may add colours, marks or symbols. In addition, for certain data of Chapter III.2 Letter C, the Member States may allow XML format and may allow access via TCP/IP. Member States may, with the agreement of the European Commission, add other applications for which no harmonised rules or documents exist yet at EU level (e.g. roadworthiness certificate), on the vehicle registration card to realise additional vehicle related services.'