

English Version

## Intelligent transport systems - ECall - Additional data concept specification for cargo in vehicles

Intelligente Verkehrssysteme - eCall - Zusätzliches  
Datenkonzeptspezifikation für Fracht in Fahrzeugen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 278.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## European foreword

This document (prEN 16405:2021) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document supersedes CEN/TS 16405:2017.

A Technical Report on this subject, proposing these specifications, was approved in 2012 (CEN/TR 16405), for field testing. The proposed specifications have subsequently been tested in the field (by EC Project HeERO and others). This resulted in a Technical Specification (CEN/TS 16405) in 2017 of which the semantic content remained unchanged. However as the parent Standard EN 15722 (eCall Minimum Set of Data) had been revised and updated, the Technical Specification was made consistent with the layout and specifications of the revised EN 15722.

The 2017 Technical Specification has been used in several other pilot projects and part of the analysis undertaken by the 2018 special project team that delivered Technical Reports 17249-X. The input of the pilot projects and the project team resulted in revisions to the Technical Specification, allowing it to be promoted to a standard. As such this document describes the first version of EN 16405.

## Introduction

An *eCall* is an emergency call generated either automatically via activation of in-vehicle sensors or manually by the *vehicle occupants*; when activated, to provide notification and relevant location information to the most appropriate 'Public Safety Answering Points' (PSAP), by means of *mobile wireless communications networks* and carries a defined standardized 'Minimum Set of Data' (MSD), notifying that there has been an incident that requires response from the emergency services and establishes an audio channel between the occupants of the vehicle and the most appropriate PSAP.

The MSD (specified in EN 15722) contains static information regarding the vehicle, dynamic information regarding its location, direction of travel etc., at the time of the incident, and makes provision for additional data to be provided.

This document provides specification for an additional data concept for (commercial) vehicles to provide dynamic data about the cargo that it is carrying at the time of the incident that triggered the *eCall*, with specific emphasis on identification of dangerous goods. Two variants are provided, one (schema A) for use if information about the goods (ADR classified or not) is known in the eCall device; the second variant (schema B) is for use if information about the load has to be fetched from other sources.

The preceding Technical Specification was tested in demonstration projects (such as HeERO) and further elaborated by a technical project team delivering TS 17429-2. Results of these are incorporated in this document, now becoming a European Standard.

In order to claim conformance with this document, communication is to be established using accepted wireless communication standards, and it is to be able to demonstrate that the MSD transferred together with any standardized data elements defined herein comply with the specifications of this document, to the extent that such data are available from the vehicle.

Revisions in regards to the preceding Technical Specification (TS16405:2017) are:

- Addition of requirements clauses (5.2)
- Corrections made in paragraph 5.4.2 (Table 2) to properly reflect ASN.1 recipe ;
- Extended the allowed types of transport;
- Extended usability of the phone number supplied;
- Added a version number to the OID;
- Improvements in the precision of technical description and update of references;
- Creation of EN;

## 1 Scope

This document defines an additional data concept that can be transferred as an additional data concept as defined in EN 15722 eCall MSD, that can be transferred from a goods carrying vehicle to a PSAP in the event of a crash or emergency via an *eCall* communication session. Two variants are provided, one (schema A) for use where information about the goods (ADR classified or not) is known in the eCall device; the second variant (schema B) is for use where such information is fetched from elsewhere.

NOTE This document is complementary and additional to EN 15722; and contains as little redundancy as possible.

The communications media protocols and methods for the transmission of the *eCall* message are not specified in this document. Its contents are independent of the protocols and methods used.

Other additional data concepts can also be transferred, and any such data concepts are registered using a data registry, see EN ISO 24978 for additional information, and [www.esafetydata.com](http://www.esafetydata.com) for an example.

## 2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15722, *Intelligent transport systems - ESafety - ECall minimum set of data*

ISO/IEC 8825-2, *Information technology — ASN.1 encoding rules — Part 2: Specification of Packed Encoding Rules (PER)*

EN ISO 24978, *Intelligent transport systems - ITS Safety and emergency messages using any available wireless media - Data registry procedures (ISO 24978)*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### 112

single European emergency call number supporting Teleservice 12

[SOURCE: ETSI/TS 122 003]

### 3.2

#### ADR

United Nations treaty that governs transnational transport of hazardous materials, known as *Agreement of 30 September 1957 concerning the international carriage of Dangerous goods by Road* or *Accord relatif au transport international des marchandises Dangereuses par Route*

### 3.3

#### ASN.1

##### Abstract Syntax Notation One

notation that describes rules and structures for representing, encoding, transmitting, and decoding data enabling representation of objects that are independent of machine-specific encoding techniques

### 3.4

#### **commercial vehicle**

mechanically propelled road vehicle (mostly vehicle type N1, N2 or N3) that is of a construction primarily suited for the carriage of goods or burden of any kind (not including people) and travelling on a road laden

Note 1 to entry: This explicitly excludes busses or other vehicles designed and constructed for the carriage of passengers (ie. vehicle types M1, M2 or M3). It however includes vehicles designed or adapted to carry goods in other vehicle types (like: O). Any such vehicle may or may not have a maximum weight exceeding 3,500 tonnes

### 3.5

#### **dangerous goods**

categories of goods carried by road characterised as articles or substances which are capable of posing a significant risk to health, safety or to property when transported

### 3.6

#### **eCall**

emergency call generated either automatically via activation of in-vehicle sensors or manually by the vehicle occupants

Note 1 to entry: When activated it provides notification and relevant location information to the most appropriate 'Public Safety Answering Point', by means of mobile wireless communications networks, carries a defined standardized 'Minimum Set of Data' notifying that there has been an incident that requires response from the emergency services, and establishes an audio channel between the occupants of the vehicle and the most appropriate 'Public Safety Answering Point'

### 3.7

#### **Kemler code**

code describing the hazards of a chemical in transport, also known as Hazard Identification Number (HIN)

### 3.8

#### **uniform resource identifier**

##### **URI**

string of characters used to identify a name or a resource on the Internet

### 3.9

#### **uniform resource locator**

##### **URL**

URI that, in addition to identifying a resource, provides a means of locating the resource by describing its primary access mechanism

EXAMPLE      Its network location

## 4 Symbols and abbreviations

ETSI	European Telecommunications Standards Institute
M	Mandatory
MSD	Minimum set of data
O	Optional
PER	Packed Encoding Rules (ASN.1)