
**Information technology — Automatic
identification and data capture
techniques — GS1 Application
Identifiers and ASC MH10 Data
Identifiers and maintenance**

*Technologies de l'information — Identificateurs d'application — GS1
et identificateurs de données d'ASC MH10 et entretien*

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword – Supplementary information](#).

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 31, *Automatic identification and data capture techniques*.

This third edition cancels and replaces the second edition (ISO/IEC 15418:2009), which has been technically revised with the following correction:

- the URLs for Materials Handling Industry (MHI) found in [4.2](#) and [A.2](#) have been updated.

Information technology — Automatic identification and data capture techniques — GS1 Application Identifiers and ASC MH10 Data Identifiers and maintenance

1 Scope

This International Standard

- specifies sets of Data Identifiers and Application Identifiers for the purpose of identifying encoded data, and
- identifies the organizations responsible for their maintenance.

2 Normative references

The following document, in whole or in part, is normatively referenced in this document and is indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 19762, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary*

ANS MH10, *Data Identifiers and Application Identifiers*

GS1, *General Specifications*

ISO/IEC 15418:2016

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 apply.

4 Data Identifiers and Application Identifiers

Where appropriate, information encoded shall be identified in accordance with one of the following sets of identifiers:

- a) GS1 Application Identifiers;
- b) ASC MH10 Data Identifiers.

4.1 GS1 Application Identifiers

The GS1 item identification system and related encoding standard are complemented by the GS1-maintained Application Identifiers, hereafter referred to as “GS1 Application Identifiers” (GS1 AIs). This International Standard comprises two principal elements that are the key to any encoding system: the data content and the data carrier.

The use of GS1 AIs is subject to the rules established by GS1.

GS1 AIs identify generic and simple data fields for use in cross-sectorial and international supply chain applications. The GS1 General Specifications provide rules for the definition, format and structure of the data fields.

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Each GS1 AI consists of two or more characters. The first two digits determine the length of the AI. A list of two digit codes indicating the predefined length of existing and future AIs and their data fields is available from the Application Identifier Maintenance Body specified in [Clause 5](#).

4.2 ASC MH10 Data Identifiers

The full list of registered ASC MH10 Data Identifiers and the full specification for their use are found in the American National Standard MH10 “Data Application Identifier Standard”, hereafter referred to as the “ASC MH10 Data Identifiers”

ASC MH10 Data Identifiers may be used with any alphanumeric data carrier and are designed to ensure cross-industry commonality of data identifiers used in automatic identification technologies.

ASC MH10 Data Identifiers have a format of one alphabetic character alone, or one alphabetic character prefixed by one, two or three numeric characters.

Some ASC MH10 Data Identifiers may incorporate format definitions. The American National Standards Institute (ANSI) has designated ANS MH10 as a “Continuous Maintenance” standard. As such, the official standard with maintenance updates is available at <http://www.mhi.org/standards/di>

A full list of the last balloted ASC MH10 Data Identifiers is available from:

Customer Service Material Handling Industry

8720 Red Oak Blvd., Suite 201 Charlotte, NC 28217-3992 USA

Phone: +1 704/522-8644

Fax: +1 704/522-7826

Website: <http://www.mhi.org/standards/di>

or

Customer Service

4th Floor, American National Standards Institute (ANSI) 25 West 43rd Street,
New York, NY 10036 USA

Phone: +1 212/642-4900

Fax: +1 212/398-0023

Website: <http://webstore.ansi.org/>

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5 Maintenance

Organizations responsible for the maintenance of GS1 Application Identifiers and ASC MH10 Data Identifiers in accordance with [Clause 4](#) are found in [5.1](#) and [5.2](#).

5.1 GS1 Application Identifiers

GS1 Application Identifier Secretariat

GS1 Customer Service

Blue Tower, Avenue Louise 326, BTE 10, BE 1050 Brussels

Belgium

Phone: +32 2/788 78 00

Fax: +32 2/788 78 99

Email: contactus@gs1.org

GS1 is a worldwide coding management organization for identification numbers, encompassing the associations previously known as EAN International and Uniform Code Council. The GS1 System is maintained through a network of national and pluri-national agencies known as Member Organizations, named GS1 followed by the country name, for example, GS1 France, GS1 US, or GS1 Russia. The working language of GS1 Application Identifier Secretariat is English. Local language versions of the GS1 Application Identifier, and full information on how to request a new Application Identifier, are available

from GS1 Member Organizations. Contact details of GS1 Member Organizations are available from <http://www.gs1.org/contact/worldwide.php>

5.2 ASC MH10 Data Identifiers

The purpose of the ASC MH10 Data Identifier Maintenance Committee is to provide ANSI MH10 DIs for any legitimate data element used between trading partners, as well as for internal applications, providing that there is no conflict with an existing ANSI MH10 DI. In order to ensure system integrity, once codified in the standard, ANSI MH10 DIs are never modified. Should an ASC MH10 DI user find that no ASC MH10 DI meets their specific need, the user is encouraged to contact the Data Identifier Maintenance Committee for guidance or submit a request for a new ANSI MH10 DI. See contact details above.

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Annex A (informative)

User guidance

A.1 Choice between GS1 Application Identifiers or ASC MH10 Data Identifiers

The choice between GS1 Application Identifiers or ASC MH10 Data Identifiers for any user will normally be defined in the applicable industry convention being followed.

Other industries developing product or shipment identification conventions should consider business practices, information requirements and systems capabilities of the trading partners in choosing between ASC MH10 Data Identifiers and GS1 Application Identifiers. The user may also consider the following guidelines:

a) GS1 Application Identifiers

The definitions of the GS1 Application Identifiers are supported by application guidelines. The GS1 AIs, and associated guidelines, have been designed for international and multi-sectorial trading purposes.

b) ASC MH10 Data Identifiers

The descriptions in the ASC MH10 Data Identifier list are general in nature. ASC MH10 Data Identifier users are advised to look in the appropriate ISO or industry application guidelines for guidance.

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A.2 Working with GS1 Application Identifiers and ASC MH10 Data Identifiers

This International Standard recognizes two identifier groups: The GS1 Application Identifiers and the ASC MH10 Data Identifiers. The user, normally in association with trading partners, has to decide which to use.

All user organizations would prefer a universal information flow based upon a single system, however the two systems, which have some very different characteristics and functionalities, are used by organizations that have invested in data systems and see a change to another approach as offering an incremental improvement at a relatively high cost.

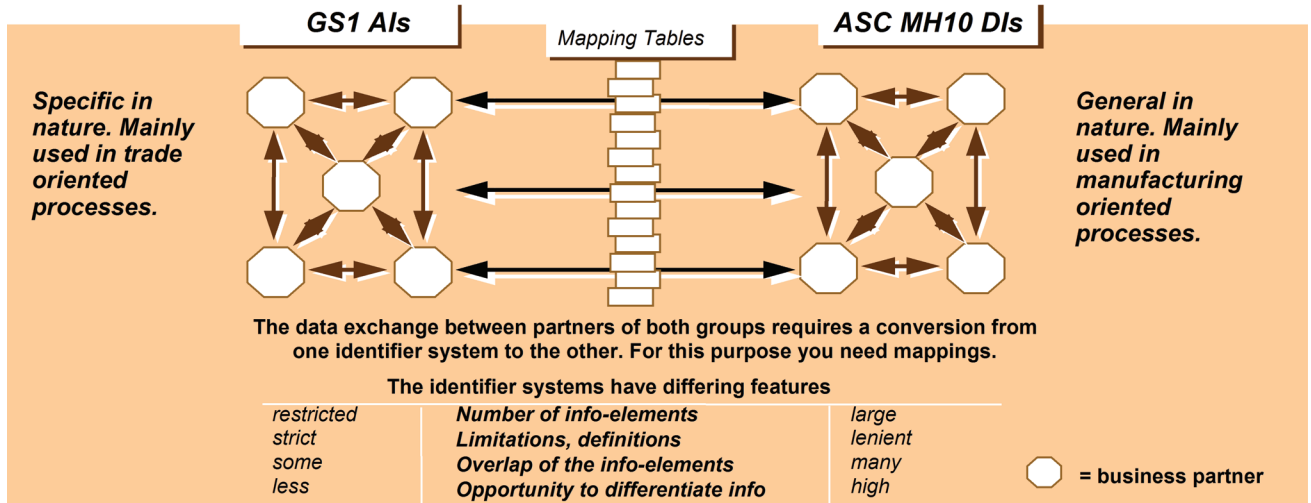
Thus some manufacturing industries are forced to work with both systems to meet ALL their customer needs. It is therefore necessary for these industries to build internal systems capable of “mapping” the data in one system to the other. Further, it is often required to assign also the information elements of EDIFACT (or other Electronic Data Interchange Message Set) in the electronic data of the orders and deliveries.

Due to the different philosophies used to develop GS1 Application Identifiers and ASC MH10 Data Identifiers it is impossible to provide 100 % accurate one-to-one mapping. However, publicly available mappings between GS1 Application Identifiers and ASC MH10 Data Identifiers have been developed [e.g. ANS MH10, Section III (DIs to AIs) <http://www.mhi.org/standards/di> and ANS MH10, Section IV (AIs to Dis) <http://www.mhi.org/standards/di>].

Mapping tables found in [Figure A.1](#) can be of help to companies when using GS1 Application Identifiers and ASC MH10 Data Identifiers.

Order and Delivery Data Exchange

Business partners using both GS1 AIs and ASC MH10 DIs



There are many GS1 AIs and ASC MH10 DIs which have no direct equivalent in the other system or, at best, one with similar meaning.

Figure A.1 — Comparisons between GS1 AIs and ASC MH10 DIs

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