



**International
Standard**

ISO/IEC 19583-26

**Information technology — Concepts
and usage of metadata —**

Part 26:
**XML for representation of ISO/IEC
11179-3:2013 content**

**First edition
2026-04**



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2026

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
3.1 General computing terms.....	1
3.2 Terms relating to XML Schema and RDF.....	2
4 Conformance	2
4.1 Overview of conformance.....	2
4.2 Degree of conformance.....	3
4.2.1 General.....	3
4.2.2 Strictly conforming implementations.....	3
4.2.3 Conforming implementations.....	3
5 Use cases, modelling principles and mapping conventions	3
5.1 General.....	3
5.2 Directionality and indirection of relationships.....	4
5.3 Schema documents.....	4
5.4 Schema style.....	5
5.5 Schema conventions.....	5
6 Overview of ISO/IEC 11179-3:2013 Representation in XML Schema	5
6.1 General.....	5
6.2 Basic Types metamodel region (ISO/IEC 11179-3:2013, 6.2).....	6
6.3 Basic Classes metamodel region (ISO/IEC 11179-3:2013, 6.3).....	6
6.4 Identification metamodel region (ISO/IEC 11179-3:2013, 7.2).....	6
6.5 Designation and Definition metamodel region (ISO/IEC 11179-3:2013, Clause 7).....	6
6.6 Registration metamodel region (ISO/IEC 11179-3:2013, Clause 8).....	6
6.7 Concepts package (ISO/IEC 11179-3:2013, Clause 9), Binary Relations package (ISO/IEC 11179-3:2013, Clause 10).....	6
6.8 Metadata Item Type.....	7
6.9 Data Description package (ISO/IEC 11179-3:2013, Clause 11).....	7
6.9.1 General.....	7
6.9.2 Measurement metamodel region (ISO/IEC 11179-3:2013, 11.4).....	7
6.9.3 Data Element Concept metamodel region (ISO/IEC 11179-3:2013, 11.2).....	7
6.9.4 Conceptual and Value Domain metamodel region (ISO/IEC 11179-3:2013, 11.3).....	8
6.9.5 Data_Element metamodel region (ISO/IEC 11179-3:2013, 11.5).....	8
6.10 ISO/IEC 11179-3:2013 Message and Database Schema.....	8
Annex A (informative) Summary of differences between ISO/IEC 11179-3:2013 and ISO/IEC 11179-3:2023, ISO/IEC 11179-31:2023 and ISO/IEC 11179-32:2023	9
Annex B (normative) Common Facilities Schema	13
Annex C (normative) ‘Four Corners’ Schema	34
Annex D (normative) Message Schema	43
Annex E (informative) Example Database Schema	46
Annex F (informative) Class, attribute and relation name correspondence	48
Bibliography	50

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.

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 or www.iec.ch/members_experts/refdocs).

ISO and IEC draw attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO and IEC take no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO and IEC had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents and <https://patents.iec.ch>. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

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

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

A list of all parts in the ISO/IEC 19583 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

The ISO/IEC 11179 series addresses the semantics of data, the representation of data, and the registration of the descriptions of that data. At the time of the publication of ISO/IEC 11179-3:2013 to which this document refers, ISO/IEC 11179 was a six-part series of standards, whose conceptual model was specified in ISO/IEC 11179-3. Since this time, part three has continued to be refined, developed and factorized.

ISO/IEC 11179-3:2013 does not define a physical implementation and thus need not be implemented as specified, which makes exchanging content between even compliant registries difficult. A common physical implementation is required if automatic content exchange is to be achieved.

ISO/IEC 11179-3:2013 representation in W3C XML Schema is such a physical representation. It also provides a potential model for its implementation as an XML database focused on units of content that are readily created and maintained – particularly if reasoning over the ‘meaning’ of that content can be delegated to an accompanying RDF database as described in ISO/IEC TR 19583-24.

As the adoption of 11179 MDRs expands, metadata registries will need to reuse and extend definitions from other MDRs, together with definitions reflecting local information types. The schema allows metadata registry content to be exchanged in a standard format regardless of the kind of registry software in use.

The schema is presented in ‘Venetian Blind’ style, where each of the components of the model are rendered as reusable types. These types are assembled into discrete documents suitable for creation and exchange. The main body of the document describes the schema together with the principles and conventions that were followed to map classes, attributes, and associations of the conceptual model into an acyclic, directed graph suitable for an unambiguous document-based representation. The schema is specified in three parts in [Annex B](#), [C](#) and [D](#). Additionally, [Annex A](#) describes the relationship between the 2013 and current editions of ISO/IEC 11179-3, ISO/IEC 11179-31 and ISO/IEC 11179-32; [Annex E](#) suggests a schema derived from [Annex B](#) and [C](#) to support a XML database system holding ISO/IEC 11179 content; [Annex F](#) contains a compliant, example message communicating data elements between two registries.

Where direct reference is made to class, attribute and relationship names from models described in parts of ISO/IEC 11179, class names are emboldened with initial capital letters and have spaces replaced by underscore characters, attribute names are emboldened in lower case and have spaces replaced by underscore characters, and relationship names are italicised in lower case with spaces replaced by underscore characters.

Information technology — Concepts and usage of metadata —

Part 26:

XML for representation of ISO/IEC 11179-3:2013 content

1 Scope

This document specifies the structure of ISO/IEC 11179-3:2013 representation in W3C XML Schema suitable for communication of content between compliant registries. The schema described in this document will implement a class and attribute vocabulary that matches the conceptual model presented in ISO/IEC 11179-3:2013 in W3C XML Schema format. The purpose of the schema is for the exchange of compliant metadata, and to support the validation of messages exchanged between registries. It is not intended for the communication of data element metadata alongside the data to which the metadata refers.

The document specifies the schema and the principles and conventions that were followed to map classes, attributes, and associations of the conceptual model into an acyclic, directed graph suitable for an unambiguous document-based representation.

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.

ISO/IEC 11179-3:2013¹⁾, *Information technology — Metadata registries (MDR) Part 3: Registry metamodel and basic attributes*

ISO/IEC 11179-6:2015²⁾, *Information technology — Metadata registries (MDR) Part 6: Registration*

W3C XML Schema <https://www.w3.org/XML/Schema>

1) Withdrawn and replaced by ISO/IEC 11179-3:2023.

2) Withdrawn and replaced by ISO/IEC 11179-6:2023.

Bibliography

- [1] ISO/IEC TR 19583-24:2025, *Information technology — Concepts and usage of metadata — Part 24: 11179-3:2013 Metamodel in RDF*
- [2] ISO 11615, *Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated medicinal product information*
- [3] ISO 11616, *Health informatics — Identification of medicinal products — Data elements and structures for unique identification and exchange of regulated pharmaceutical product information*
- [4] ISO 11238, *Health informatics — Identification of medicinal products — Data elements and structures for the unique identification and exchange of regulated information on substances*