

**TR ISO/TS 14048:2022**  
**ISO/TS 14048:2002, IDT**  
(ICS 13.020.60)

**TECHNICAL REFERENCE**

**Environmental management – Life cycle  
assessment – Data documentation format**

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## National Foreword

This Technical Reference (TR) was prepared by the Working Group on GHG and Product Life Cycle set up by the Technical Committee on Environmental Management under the purview of the Environment and Resources Standards Committee (ERSC).

This TR is an identical adoption of ISO/TS 14048:2002, “Environmental management – Life cycle assessment – Data documentation format”, published by the International Organization for Standardization.

NOTE 1 – Where appropriate, the words “Technical Specification” are read as “Technical Reference”.

NOTE 2 – Reference to International/Overseas Standards are replaced by applicable Singapore Standards or Technical References.

This TR is a provisional standard made available for application over a period of three years. The aim is to use the experience gained to update the TR so that it can be adopted as a Singapore Standard. Users of the TR are invited to provide feedback on its technical content, clarity and ease of use. Feedback can be submitted using the form provided in the TR. At the end of the three years, the TR will be reviewed, taking into account any feedback or other considerations, to further its development into a Singapore Standard if found suitable.

Attention is drawn to the possibility that some of the elements of this TR may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

### NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions. Where SSs are deemed to be stable, i.e. no foreseeable changes in them, they will be classified as “mature standards”. Mature standards will not be subject to further review, unless there are requests to review such standards.*
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# TECHNICAL SPECIFICATION

# ISO/TS 14048

First edition  
2002-04-01

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## **Environmental management — Life cycle assessment — Data documentation format**

*Management environnemental — Analyse du cycle de vie — Format de  
documentation de données*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committee is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by least 75 % of the member bodies casting a vote.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years with a view to deciding whether it should be confirmed for a further three years, revised to become an International Standard, or withdrawn. In the case of a confirmed ISO/PAS or ISO/TS, it is reviewed again after six years at which time it has to be either transformed into an International Standard or withdrawn.

Attention is drawn to the possibility that some of the elements of this Technical Specification may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 14048 was prepared by Technical Committee ISO/TC 207, *Environmental management*, Subcommittee SC 5, *Life cycle assessment*.

Annex A forms a normative part of this Technical Specification. Annex B is for information only.

## Introduction

This Technical Specification provides a framework and requirements for the unambiguous documentation of Life Cycle Inventory analysis (LCI) data. Following the general framework for Life Cycle Assessment (LCA), laid down in ISO 14040, and the requirements and guidance on LCI, provided in ISO 14041, this specification intends to support a transparent reporting, interpretation and review of data collection, data calculation, data quality and data reporting, as well as facilitating data exchange. This Technical Specification supports LCA use and development, and is aimed primarily for data suppliers, LCA practitioners and LCA information system developers.

The data documentation format facilitates the reporting of LCI data and compliance with the requirements from ISO 14040 and ISO 14041 on data collection, data documentation and data quality. It also facilitates interpretation of LCI data as described in ISO 14043. In addition, the data documentation format allows the documentation and use of important information for Life Cycle Impact Assessment (LCIA), ISO 14042, including environmental information, environment condition and location.

The data documentation format is also intended to facilitate the exchange of LCI data without loss of transparency. This specification does not provide specific requirements for implementation of data exchange. However, the specification allows the flexibility to design different data exchange and data communication formats, as well as software tools that are fully consistent with the data documentation requirements herein.

Although primarily intended for documentation of life cycle data, the data documentation format can also be used for the management of environmental data, e.g. for reporting, performance assessment and benchmarking.

As practice emerges or needs for a broader use of data documentation format arise, the contained format and structure may be expanded to include additional information, such as from environmental performance evaluation, health and safety, and life cycle costing.

This Technical Specification contains a comprehensive list of requirements, rather than a procedural specification. The document specifies how the general documentation requirements for LCI data, as expressed in the ISO 14040 standards, is divided into data fields. Each data field holds text, in some cases selected from a specific nomenclature, or quantitative data. The meaning of each data field is specified in a short descriptive text. The structure of the document itself specifies the relationship between the data fields.

The specification, explanation and implementation of the data documentation format is described in different parts of the document as follows:

- clause 5 covers the specification and structure of the data documentation format and the names of all of the data fields;
- clause 6 covers the specification of the data types used in the data documentation format;
- clause 7 covers the specification of nomenclatures used in the data documentation format;
- annex A contains formatting requirements and explanatory descriptions of each data field to help the user understand which information to place in each data field;
- annex B contains a detailed example of the use of the data documentation format.



# Environmental management — Life cycle assessment — Data documentation format

## 1 Scope

This Technical Specification provides the requirements and a structure for a data documentation format, to be used for transparent and unambiguous documentation and exchange of Life Cycle Assessment (LCA) and Life Cycle Inventory (LCI) data, thus permitting consistent documentation of data, reporting of data collection, data calculation and data quality, by specifying and structuring relevant information.

The data documentation format specifies requirements on division of data documentation into data fields, each with an explanatory description. The description of each data field is further specified by the structure of the data documentation format.

This Technical Specification is applicable to the specification and structuring of questionnaire forms and information systems. However, it can also be applied to other aspects of the management of environmental data.

This Technical Specification does not include requirements on completeness of data documentation. The data documentation format is independent of any software or database platform for implementation.

This Technical Specification does not require any specific sequential, graphic or procedural solutions for the presentation or treatment of data, nor does it describe specific modelling methodologies for LCI and LCA data.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this Technical Specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this Technical Specification are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8601:2000, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 9000:2000, *Quality management systems — Fundamentals and vocabulary*

ISO 14040:1997, *Environmental management — Life cycle assessment — Principles and framework*

ISO 14041:1998, *Environmental management — Life cycle assessment — Goal and scope definition and inventory analysis*

ISO 14042:2000, *Environmental management — Life cycle assessment — Life cycle impact assessment*

ISO 14043:2000, *Environmental management — Life cycle assessment — Life cycle interpretation*