





1. Good Drafting Principles

ISO principles for drafting

- Planning and preparation
- Aim-oriented approach
- Fitness for implementation as a regional or international standard
- Performance principle
- Verifiability
- Consistency
- Avoidance of duplication and unnecessary deviations
- Accommodation of more than one product size
- Characteristics not specific in a document

Planning and preparation

Before any drafting commences committees are to determine:

1. The intended structure;
2. The intended audience and users;
3. Any interrelationships; and
4. The organization and subdivision of the subject matter
5. Roles and responsibilities (where applicable)



Aim-orientated approach

It is not always necessary or possible to standardise all characteristics of an item or a subject.

The choice of characteristics to be standardised depends on the aims of the standard (e.g. health, safety, protection of the environment, interface, interchangeability, compatibility or interworking, and variety control).



Fitness for use as regional or international standard

Documents shall be written so that they can be applied and adopted without change as a regional or national standard.

Only characteristics that are suitable for international acceptance shall be chosen.

Where necessary, several options may be indicated (e.g. owing to differences in legislation, climate, environment, economies, trade patterns).

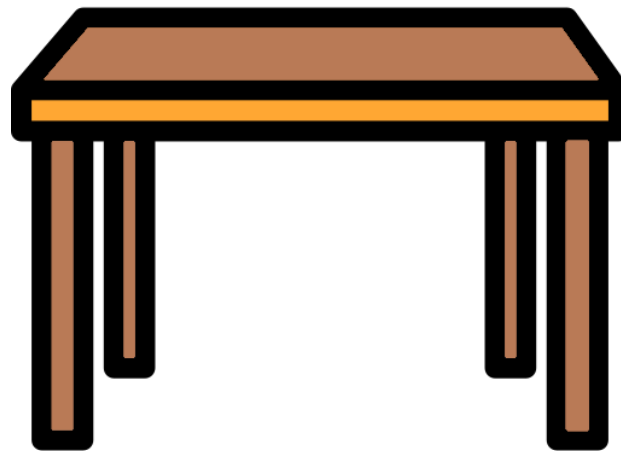


Performance principle

Requirements are to be expressed (whenever possible) in terms of performance rather than design or descriptive characteristics...

Design / descriptive requirements

The table shall have four wooden legs.



Performance requirements

The table shall be constructed such that when subjected to ... [stability and strength criteria].

Verifiability

When writing requirements for standards, it is important that they are objectively verifiable.

What is the issue with the below statement?

Hold samples shall be subjected to **five temperature cycles** each for a **period of 1 h at -30 °C** followed by a **period of 1 h at +70 °C**.

Consistency

Consistency should be maintained regarding:

1. The structure of associated documents and the numbering of their clauses
2. Identical wording used to express identical provisions
3. The same terminology should be used throughout the document. The use of synonyms should be avoided

Example - Consistency

4. GRADING

Cassava is classified in three grades defined below:

4.1 Premium Grade

Cassava in this grade must be of superior quality. It must be characteristic of the variety and/or commercial type. It must be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

When frozen, the product must retain its natural coloration, turgor and shape, including when thawed.

4.2 Grade I

Cassava in this grade must be of good quality. It must be characteristic of the variety and/or commercial type. The following slight defects, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- slight defects in shape;
- scarring or healed damage, not exceeding 5% of the surface area;
- scraped areas, not exceeding 10% of the surface area; and
- Retains natural coloration in the frozen state and a consistent colour when thawed;

4.3 Grade II

This grade includes cassava which does not qualify for inclusion in the higher grades, but satisfy the minimum requirements specified in Section 3.2 above. Cassava products in this grade qualify for the local trade only and DO NOT QUALIFY for the export trade.

The following defects may be allowed, provided the cassava retains its essential characteristics as regards the quality, the keeping quality and presentation:

- defects in shape;
- scarring or healed damage, not exceeding 10% of the surface area; and
- scraped areas, not exceeding 20% of the surface area.

The defects must not, in any case, affect the pulp (fleshy tissue) of the produce.

6.1 QUALITY TOLERANCES

6.1.1 "Extra" Grade

Five percent by number or weight of cassava not satisfying the requirements of the grade, but meeting those of Grade I or, exceptionally, coming within the tolerances of that grade.

6.1.2 Grade I

Ten percent by number or weight of cassava not satisfying the requirements of the grade, but meeting those of Grade II or, exceptionally, coming within the tolerances of that grade.

6.1.3 Grade II

Ten percent by number or weight of cassava satisfying neither the requirements of the grade nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

Avoidance of duplication

Documents should avoid duplication.

Before standardising any item or subject, committees shall determine whether an applicable standard already exists.

If it is necessary to use a requirement that appears elsewhere (for example another standard), this should be done by referencing, not by repetition.

Accommodation of more than one product size

If the aim of a document is standardization of a single size for a product, but there is more than one widely accepted size in international use, a committee may decide to include alternative product sizes in the document.

In such cases, every effort shall be made to reduce the number of alternatives to a minimum, taking the following points into account:

- the volume of international trade in the sort of product;
- only sizes that are likely to be in international use in the reasonably foreseeable future (e.g. five years or more) shall be included in the document.

Characteristics not specified in a document

- In some cases, a document may list characteristics that can be chosen freely by the supplier.
- The characteristics chosen shall be stated, for example on a nameplate, label or accompanying document.
- For most kinds of complex item, it is impractical to specify exhaustive performance requirements. Instead, it is preferable to require that the item be supplied with a list of performance data.
- Documents listing characteristics for which suppliers or purchasers are required to state values or other data not specified by the document shall specify how such values are to be measured and stated.



2. Subdivision of materials



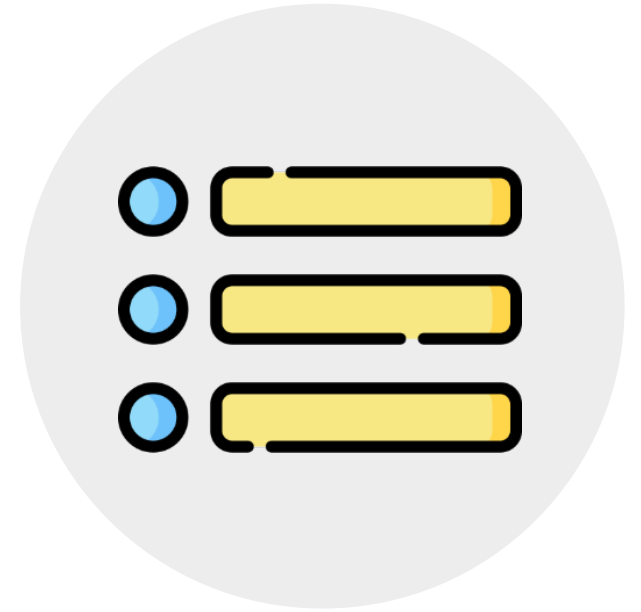
Subdivision of subject matter



Parts



Sections



Clauses

Parts

A document can be divided into parts (i.e. separate documents) if:

- the document is likely to become too long;
- subsequent parts of the content are interlinked;
- portions of the document could be referred to in regulations; or
- portions of the document are intended to serve for certification purposes.

This has the advantage that each part can be revised separately as necessary.

Parts can be subdivided in two ways...



Each part deals with a specific aspect of the subject and can stand alone

AS 5388 Forensic analysis and reporting:

- Part 1: Recognition, recording, recovery, transport and storage of material
- Part 2: Analysis and examination of material
- Part 3: Interpretation
- Part 4: Reporting

There are **common** and **specific** aspects to the subject

AS/NZS 1841 Portable fire extinguishers:

Part 1: General requirements

Part 2: Specific requirements: water type extinguishers

Part 3: Specific requirements: wet chemical type extinguishers

Part 4: Specific requirements: foam type extinguishers

Part 5: Specific requirements: powder type extinguishers

Part 6: Specific requirements: carbon dioxide type extinguishers

Part 7: Specific requirements: vaporizing liquid type extinguishers

Part 8: Specific requirements: non-rechargeable type extinguishers

Sections and clauses

Example of how sections and clauses are arranged:

Section	1. Scope and General
Clauses	1.1 Scope
	1.2 Normative references
	1.3 Terms and definitions
Section	2. Construction Materials
Clauses	2.1 Steel
	2.2 Timber
	2.3 Concrete
<i>(Sub)Clauses</i>	<i>2.3.1 General</i>
	<i>2.3.2 Steel reinforced</i>
Section	3. Design
Clauses	3.1 General
	3.2 Finish and workmanship
<i>(Sub)Clauses</i>	<i>3.2.1 General</i>
	<i>3.2.2 Finish</i>

Example: Clauses

What might the issue be with the definitions in the draft version of the EPB Standard?

APPENDIX 1: DEFINITIONS AND TERMINOLOGY

Categories of building purposes

The definition of purposes corresponds to that defined in the Master Urban Plan (PUD) of the municipality where the work is planned. In the absence of a PUD, the definitions of building purposes are as follows:

Housing construction

A building or part of a building for residential use includes individual or collective dwellings, staff accommodation, boarding schools, and university residences.

Construction of hotel accommodation

A construction or part of a construction to provide hotel accommodation includes commercial establishments such as hotels and tourist accommodation.

Office construction

Office space shall be considered to be all premises and their appendix, such as corridors, hallways, meeting rooms, exhibition areas, archives, waiting and reception rooms, where management, services, advice, training, engineering, computer-related or management activities are carried out. The premises of the management of an industrial enterprise, and its general, financial, legal, and commercial services are considered to be office premises.

Commercial construction

A building or part of a building for commercial use includes the economic activities of buying and selling goods or services accessible to customers. This includes sales and exhibition spaces. Workshops and storage areas are also included if they are integrated into the main construction.

Residence with a social purpose

Specific social residences excluding social property-owners (such as workers' homes, student hostels, etc.) are considered to be residences with a social purpose.



3. Writing Technical Content



Verbal forms of expressions



Requirements



Recommendations

Verbal forms for expressions



Permission



Possibility & Capability

Activity: Writing requirements

TC1: Redraft clause [Article 8](#) so that it conforms to ISO/IEC directives, Part 2, 2021.

TC2: Redraft section [3 and 4](#) so that it conforms to ISO/IEC directives, Part 2, 2021.

Technical Content: Terms & definitions

Requirements for Terms

- Clause Number
- Definition
- Source (Where applicable)

Optional elements for Terms

- Abbreviated term or symbol
- Admitted terms (Synonyms)
- Example to illustrate the concept

Example: Terms & definitions

Term Number

Unique identifier

Admitted terms

- Other acceptable terms used for the concept

Definition

- Single phrase which can replace the term in context
- May be followed by a non verbal representation of the concept such as a figure or formula
- Domain in angle brackets, indicates the subject area or in what context

3.9

validation

verification

where the specified requirements are adequate for an intended use

EXAMPLE A measurement procedure, ordinarily used for the measurement of mass concentration of nitrogen in water, may be validated also for measurement of mass concentration of nitrogen in human serum.

[SOURCE: ISO/IEC Guide 99:2007, 2.4

Preferred terms

- May be, or include an abbreviated term or a symbol
- If there are several preferred terms list them in order of preference

Example

- Used to illustrate the concept

Source

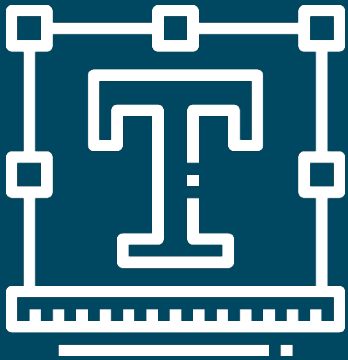
- Indicates if the entry has been taken from another document
- Where the term has been amended, give a brief description of the changes

Activity: Terms & definitions

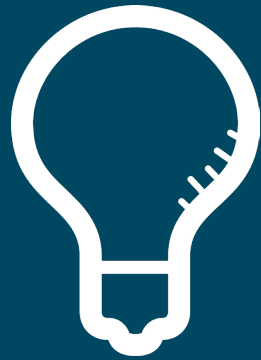
TC1: Draft a new definition for your standard for the term **Sbât** and **Sbâtref**.

TC2: Draft a new definition for your standard for the term **Cassava**.

Technical Content: Clauses



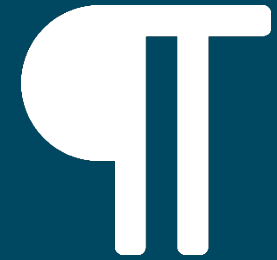
Titles



Concepts

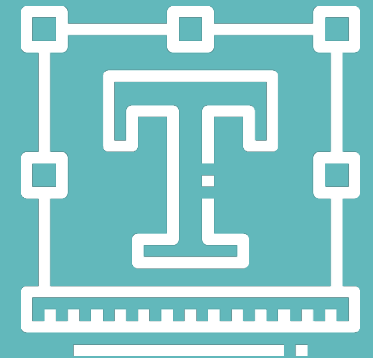


Subclauses



Hanging
Paragraphs

Clauses: Titles



Incorrect:

No title → **4.2 Method B, frequency domain**
4.2.1 Place the specimen a minimum of 5 cm from any objects that would affect measured results.

Title → **4.2.2 Calibration (reference measurement) and measurement of fixture crosstalk**
If baluns are used for a balanced measurement, or minimum loss pads used for impedance matching, see Figures A.2 and A.3, these are included in the term "fixture". If the reference document specifies the fixture so that its crosstalk contribution is known, then the fixture crosstalk measurement is optional.

Correct:

Both subclauses have a title → **4.2 Method B, frequency domain**
4.2.1 Placement of the specimen
Place the specimen a minimum of 5 cm from any objects that would affect measured results.

4.2.2 Calibration (reference measurement) and measurement of fixture crosstalk
If baluns are used for a balanced measurement, or minimum loss pads used for impedance matching, see Figures A.2 and A.3, these are included in the term "fixture". If the reference document specifies the fixture so that its crosstalk contribution is known, then the fixture crosstalk measurement is optional.

[Source: SG-006, Figure 2]

Activity: Clause Titles

TC1: Draft clause titles for the subclauses: [Section II: Natural Ventilation](#).

TC2: Draft clause titles for the subclauses: [9.1](#), [9.2](#), [9.3](#).

Clauses: Concepts

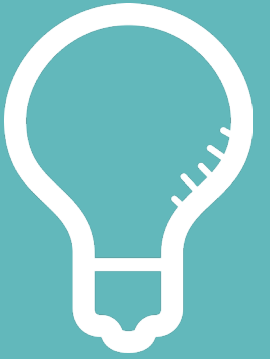


5.2.4 Battery life and loop listener

Each receiver shall have a minimum battery life of 6 h. For specifications of battery life of the hearing augmentation system refer to the product specifications.

Every infrared system shall include a loop listener for testing the neckloop of the receiver system. The loop listener shall be compatible with the audio electromagnetic signal emitted by the neckloops; and provided with compatible batteries. The loop listener should remain in the area where the hearing augmentation system is located.

Example: Concepts



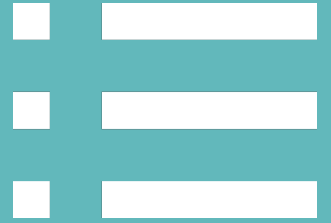
Continuous and significant needs



A "continuous need" for domestic hot water is defined as the proven need for most of the year, i.e., a continuous period without use of less than 1 month.

A "significant need" for domestic hot water is defined as a nominal daily requirement greater than 150L at 50°C.

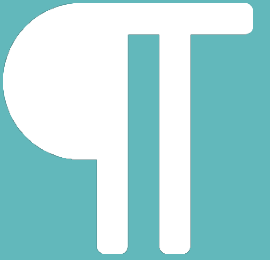
Clauses: Subclauses



Name	Example of numbering Multi-section document	Example of numbering Single-section document
Section	Section 1	Not used
Clause	1.1	1
Subclause	1.1.1	1.1
Subclause	1.1.1.1	1.1.1
Subclause	1.1.1.1.1	1.1.1.1
Paragraph	Not numbered	Not numbered
Appendix	A	A
Clause (in Appendix)	A.1	A.1
Subclause	A.1.1	A.1.1
Subclause	A.1.1.1	A.1.1.1
Paragraph	Not numbered	Not numbered

[Source: SG-006, Table 9]

Clauses: Hanging Paragraphs



Incorr�ct	Correct
<p>5 Uncertainty of the certified value</p> <p>The combined expanded uncertainty of the measurement is calculated... } hanging paragraph</p> <p>5.1 Budget of uncertainty</p> <p>[...]</p>	<p>5 Uncertainty of the certified value</p> <p>5.1 General</p> <p>The combined expanded uncertainty of the measurement is calculated...</p> <p>5.2 Budget of uncertainty</p> <p>[...]</p>

[Source: SG-006, Figure 3]

Technical Content: Notes



- A note in the text is an advisory or illustrative statement to help the user
- Notes integrated into the text:
 - are always informative (no direct or implied requirements)
 - provide additional information
 - can be removed without affecting the use of the document
 - are placed immediately below the clause or paragraph they refer to; rarely after a clause title
 - are preceded by the word “NOTE” (single) or “NOTE 1”, “NOTE 2”, etc

Technical Content: Tables & Figures

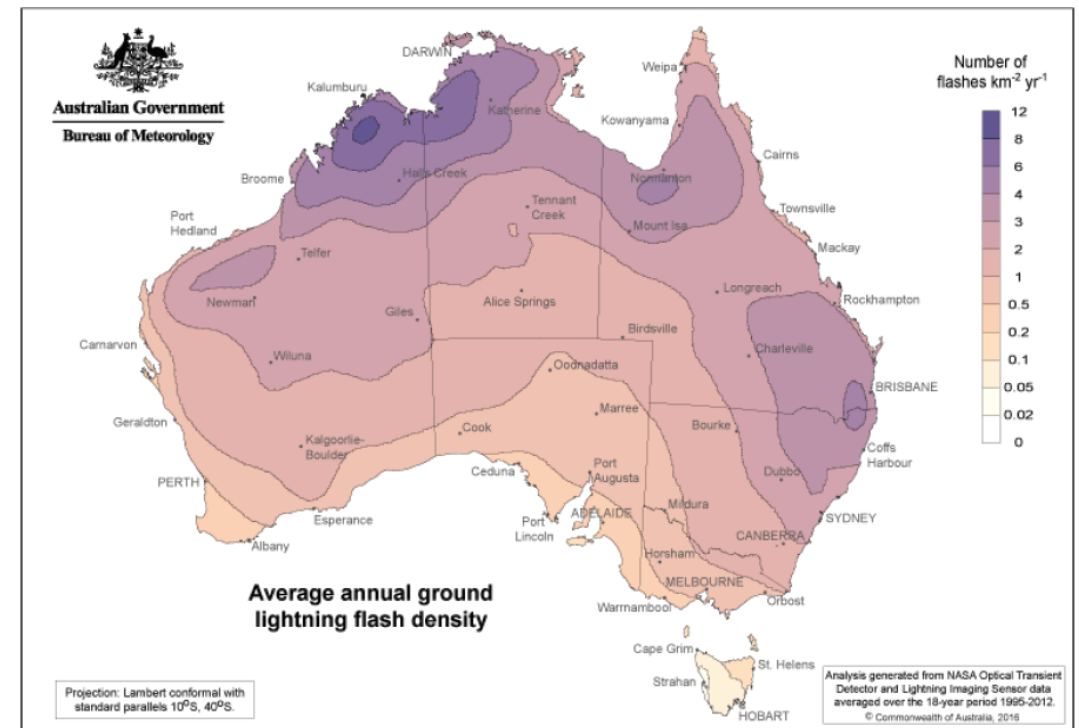
Table 4.1 — Surge ratings for a.c. power system SPDs per phase — MEN (TN-C-S) systems and other TN, TT and IT systems

Zone boundary	Location category ^a	SPD location	I_{max} rating, 8/20 μ s, kA	I_n rating, 8/20 μ s, kA	I_{imp} rating, 10/350 μ s, kA
LPZ2/...n	A	Long final subcircuits and supply outlets	3 to 10	2 to 5	—
LPZ1/2	B	Major submains, short final subcircuits and load centres	40	20	—
LPZ0 _B /1	C1	Domestic service entrance or external services shielded from direct lightning strike	40	20	5
LPZ0 _A /1	C2	Industrial or commercial service entrance, building fed by long overhead or underground conductive services	100	40	10
LPZ0 _A /1 ^b	C3	Service entrance, building in a high lightning area (N_g greater than 2), or fitted with an LPS	100	40	10

Not all SPDs specify their I_{max} , I_n and I_{imp} ratings. An SPD conforming to any one of these ratings shall be deemed to conform.

^a The term location category has been defined in previous editions of AS/NZS 1768. It is shown here for the purposes of clarity.

^b In high lightning areas (e.g. in tropical regions, at mountaintop telecommunication and broadcasting sites with long overhead powerlines), it may be prudent to consider higher surge ratings for the primary SPD to provide a longer service life.



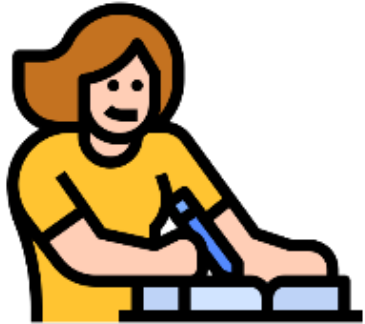
[SOURCE: Bureau of Meteorology, www.bom.gov.au. Reproduced under Creative Commons Attribution 3.0 Australia licence. © 2016 Commonwealth of Australia]

Figure C.1 — Average annual lightning ground flash density for Australia

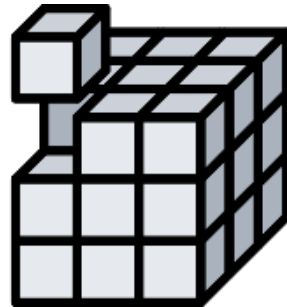
Writing for conformity assessment

- All documents containing requirements for products, processes, services, persons, systems and bodies shall be written in accordance with the “neutrality principle”, such that conformity can be assessed by a manufacturer or supplier (first party), a user or purchaser (second party), or an independent body (third party).
- Such documents shall not include requirements related to conformity assessment other than requirements which are necessary to provide repeatable and reproducible conformity assessment results.
- No document containing requirements for products, processes, services, persons, systems and bodies shall make conformity dependent on a quality management systems standard (e.g. it shall not make normative reference to ISO 9001).

Tips for good writing



General



Homogenous
and consistent



Clarity



Conform to
established
practice



Thank you for
attending today's
session!