INTERNATIONAL STANDARD

ISO 257

Fourth edition
2018-12

Pesticides and other agrochemicals — Principles for the selection of common names

Produits phytosanitaires et assimilés — Principes pour le choix des noms communs

Reference number
ISO 257:2018(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

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.

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 ISO documents 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 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 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.

This document was prepared by Technical Committee ISO/TC 81, *Common names for pesticides and other agrochemicals*.

This fourth edition cancels and replaces the third edition (ISO 257:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Annex A (Procedure for the establishment of common names for pesticides and other agrochemicals) that was included in previous editions has been removed from this document and incorporated in the Terms of Reference for the Maintenance Agency for ISO 1750.

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.

Introduction

This document contains principles for the construction of common names for pesticides and other agrochemicals. The intention is to create short, distinctive, easily pronounced names, which will be common to all languages, as far as is possible. This document contains recommended names for common ions and radicals, as well as recommended stems for different chemical structures. Therefore, the common name should reflect any relationship with chemicals of a similar structure. However, it is important to avoid confusion between common names and existing names, whether they are other common names, trade names or chemical names. Recommendations on how to name isomers, salts, esters, etc. are also included. Common names are intended to be permanent; they do not expire, and they are not withdrawn when a substance is no longer marketed. These principles are defined for the guidance of proposers of such common names and for the operation of ISO/TC 81 and of the Maintenance Agency for ISO 1750.

Pesticides and other agrochemicals — Principles for the selection of common names

1 Scope

This document gives principles for creating common names for pesticides and other agrochemicals. These principles are defined for the guidance of proposers of such common names. The procedure for the establishment of common names is given in the Terms of Reference of the Maintenance Agency for ISO 1750, *Pesticides and other agrochemicals — Common names*.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
common name
name freely available for common use in identifying a chemical substance without recourse to its systematic chemical name

4 Purpose of common names

4.1 The purpose of a common name is to provide a short, distinctive, easily pronounced name for a substance, the full chemical name of which is too complex for convenient use in science, commerce and official regulations.

4.2 Because a common name has to be freely available for use in describing the substance for which it has been coined, it should not be permitted to become a privately-owned trademark with respect to identical or similar goods.

4.3 In order to achieve the desired goal of creating a common name that is generally acceptable internationally, rejection of any proposed common name by individual ISO Member Bodies should only be based on serious grounds and then only after every possible effort has been made to overcome the impediment to local acceptability.

5 Principles for selection

5.1 General

5.1.1 No substance should be given a common name if its chemical name is reasonably short and distinctive (e.g. metaldehyde, carbon tetrachloride).

5.1.2 The identity of a common name should be maintained in all languages, subject to necessary linguistic variations.

5.1.3 Common names should be as short as is practicable, but should not include single letters and/or numerals except as structural qualifiers.

NOTE While the formation of common names from initials and numerals is no longer acceptable, exceptions (e.g. MCPA, 2,4,5-T) have been made for substances which are so well known by such names that to use other names would cause confusion.

5.1.4 Common names should be distinctive in sound and spelling and should be neither difficult to pronounce nor liable to confusion with existing names (see 5.5.1).

5.1.5 To facilitate international spelling and translation, "f" instead of "ph" should be used in common names; the suffix "-phenyl" in the names of esters, however, should retain its normal spelling. Similarly, "t" should be used instead of "th" with the permitted exceptions "thrin" and "thiuron". Methyl and ethyl esters retain their normal spelling.

5.1.6 Common names must contain character strings that indicate parts of current and/or obsolete chemical names for the substance. The strings may be modified for brevity or to aid pronunciation, for example "sebu" instead of "*sec*-butyl" or "teclo" instead of "tetrachloro". It is not normally appropriate for all parts of the chemical name to be indicated in the common name. Non-chemical strings may be included but should form less than half of the common name.

For some defined groups of substances, there are recommended stems that should be included in common names (see 5.6).

5.2 Salts and esters

5.2.1 Simple salts

The common name for a simple salt should be that of the parent acid, alcohol or base. In the case of an acid or alcohol, the complementary cation may be given as a hyphenated suffix, and in the case of a base, the complementary anion may be stated. A quaternary ammonium or phosphonium salt should be treated as a salt of a base.

EXAMPLES

alloxydim-sodium

bromoxynil-potassium

imazalil nitrate

chlormequat chloride

5.2.2 Simple esters

Similarly, where the substance is a simple ester or other derivative, and the existence of biological activity derives from the parent form, the common name should be that of the parent. This should be taken as the case if other esters or derivatives are known, or are expected, to exhibit similar biological activity. The complementary esterifying radical may be indicated.

EXAMPLES

mecoprop-methyl

dinoseb acetate

5.2.3 Complex esters and salts

If neither moiety of an ester or salt is simple, the common name should be that of the whole molecule.

EXAMPLES

bupirimate

decafentin

5.2.4 Recommended names for ions and radicals

Recommended names have been developed for some of the more commonly occurring ions and radicals. These are listed in Table 1 and should be used in place of the chemical names.

Table 1 — Names for ions and radicals

Recommended name	Chemical name
albesilate	alkylbenzenesulfonate
biproamine	bis(3-aminopropyl)methylammonium
butometyl	2-butoxy-1-methylethyl
butotyl	2-butoxyethyl
diclexine	dicyclohexylammonium
dimolamine	(2-hydroxyethyl)dimethylammonium
diolamine	bis(2-hydroxyethyl)ammonium
doboxyl	2-butoxypropyl
etexyl	2-ethylhexyl
ethadyl	ethylene (ethane-1,2-diyl)
etotyl	2-ethoxyethyl
isoctyl	“isooctyl” (mixed C-8 alkyl radical)
meptyl	1-methylheptyl
metilsulfate	methylsulfate
mexyl	1-methylhexyl
olamine	2-hydroxyethylammonium
tefuryl	tetrahydrofurfuryl
terboxyl	3-butoxypropyl
trimesium	trimethylsulfonium
tripromine	tris(2-hydroxypropyl)ammonium
trolamine	tris(2-hydroxyethyl)ammonium

Traditional names for radicals, as retained in Reference [2] or older editions, should be used in place of systematic or semi-systematic names, particularly when this avoids the use of locants.

EXAMPLES

butyrate

dimethylammonium

fumarate

isobutyl

isopropyl

isopropylammonium

methylammonium

propargyl

triethylammonium

5.2.5 Multiplying affixes

Multiplying affixes should be used when the parent is a dibasic (or higher) acid, alcohol or base and more than one possible derivative could be produced. Affixes should also be used in any other case where there is a need to avoid ambiguity.

EXAMPLES

chlorthal-dimethyl

chlorthal-monomethyl

diquat dibromide

iminoctadine triacetate

streptomycin sesquisulfate

thiosultap-disodium

It is not normally necessary to use multiplying affixes with the parent substance.

EXAMPLES

dalapon-magnesium [2:1 ratio]

fosetyl-aluminium [3:1 ratio]

oxpoconazole fumarate [2:1 ratio]

5.3 Purity of chemicals

Although common names should be given to chemical entities of known structure, in exceptional cases they may be given to mixtures whose composition is constant for all practical purposes and whose concentrations of active components can be specified.

Such exceptional cases may include:

a) a reaction product mixture, provided that the concentrations of the main active components fall within acceptable limits about specified proportions;

b) a polymeric reaction product mixture, provided that the concentrations of the main active component polymers (the repeating units of which are specified) in the reaction product mixture are known and are constant to within acceptable limits;

c) an extract or derivative of a natural product (from animal, plant, fungal or bacterial sources), the composition of which is constant within acceptable limits.

The ratio of the components should be specified in the definition of a common name. The range of ratios should not be more precise than is appropriate, in order to allow for future variations in manufacturing, for example specify 40–60% and 60–40% rather than 50:50, and specify 75–100% and 25–0% instead of 80% and 20%. The range of ratios should not be so broad as to encompass significant changes in biological activity.

5.4 Isomers and isomeric mixtures

5.4.1 The following special considerations should be taken into account when coining names for mixtures of isomers.

5.4.2 The common name for a substance that can exist in enantiomeric (optically isomeric) forms owing to a single asymmetric centre should be assigned, without affixes, either to the racemate or to one of the enantiomers, depending on the form for which the common name is first required. If a common name is required subsequently for another stereochemical variant, it should be the original common name with the appended suffix "-MP", "-M" or "-P", for the racemate, the (−)-isomer or the (+)-isomer, respectively.

If the rotation of polarised light cannot be determined, then the suffixes "-RS" for the racemate, "-R" for the (*R*)-isomer or "-S" for the (*S*)-isomer may be used.

If more than one chiral centre is present, it may be necessary to adopt special measures, such as a system based on appropriate modification of the original common name, for example that developed for the synthetic pyrethroids (see Annex A).

5.4.3 The common name of a substance which consists of complementary geometrical isomers should indicate the essential familial features (see 5.6). A specific isomer or subgroup of isomers of such a substance may be assigned a common name [which may include a syllable or letter(s) implying a *cis*-, *trans*-, (*E*)- or (*Z*)- form] only if the substance is produced commercially in a substantially pure form.

The ratio of the isomers should be specified in the definition of a common name. The range of ratios should not be more precise than is appropriate, in order to allow for future variations in manufacturing, for example specify 40–60% and 60–40% rather than 50:50, and specify 75–100% and 25–0% instead of 80% and 20%. The range of ratios should not be so broad as to encompass significant changes in biological activity.

5.4.4 The common name for a substance that consists of a mixture of optical and geometric isomers should be one that is appropriate to the mixture and may be modified by qualifiers to specify subgroups or individual isomers.

5.4.5 If a substance consists of a mixture of structural isomers, only one of which has the stated biological activity, the common name should be assigned only to the active isomer. However, if the substance consists of a mixture of pesticidally-active isomers, and if the isomerism consists of variations in chain branching or position of substituents, the common name should be assigned to the mixture, which should be defined as an isomeric reaction product mixture of A + B.... The ratio of the isomers should be specified in the definition of a common name. The range of ratios should not be more precise than is appropriate, in order to allow for future variations in manufacturing, for example specify 40–60% and 60–40% rather than 50:50, and specify 75–100% and 25–0% instead of 80% and 20%. The range of ratios should not be so broad as to encompass significant changes in biological activity. If necessary, names for individual isomers may be derived by modifying the common name applied to the mixture.

5.5 Additional requirements

5.5.1 A common name should not be liable to confusion with

a) established chemical names, or

b) common names already either officially authorized or in well-recognized use for other pharmaceutical, pesticidal or related substances, or

c) trademarks enjoying protection with respect to pharmaceutical, pesticidal or related substances, unless the prior consent of the trademark owner has been secured in writing.