INTERNATIONAL STANDARD

ISO 7851

Second edition 2022-04

Fertilizers, soil conditioners and beneficial substances — Classification

grais, Engrais, amendements et substances bénéfiques — Classification



Reference number ISO 7851:2022(E)



© ISO 2022

tation, no part of 'including plot' 'om either'. 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 |
|----------|--------------------------------|---|-------------|
| Forev | ord | | iv |
| 1 | Scop | pe | 1 |
| 2 | Nori | mative references | 1 |
| 3 | Terr | ms and definitions | 1 |
| 4 | Classification for fertilizers | | |
| 7 | 4.1 | Main classification principle (in accordance with nutrient contents) 4.1.1 Inorganic fertilizers 4.1.2 Organic fertilizers 4.1.3 Organo-mineral fertilizers (semi-organic fertilizers) 4.1.4 Fertilizers (mineral or organic) with added beneficial substances 4.1.5 Fertilizing product blends Auxiliary classification principle 4.2.1 Classification by acidity or alkalinity 4.2.2 Classification by product types 4.2.3 Classification by fertilizer efficiency 4.2.4 Classification by solubility | 13444444 |
| _ | Clas | sification for soil conditioners | |
| 5 | 5.1 | Inorganic soil conditioners 5.1.1 Overview 5.1.2 Ca, Mg, S soil conditioners 5.1.3 Other inorganic soil conditioners 5.1.4 Inorganic soil conditioners with added fertilizer and/or beneficial | 7 7 7 |
| | 5.2 | substances Organic soil conditioners and synthetic organic soil conditioners | 7 7 7 |
| | 5.3 | Organic soil conditioners with added fertilizers and/or beneficial substances | |
| 6 | Clas 6.1 6.2 | Plant biostimulants Beneficial nutrients | 8 |
| Anne | | nformative) Classification scheme for fertilizers, soil conditioners and beneficial stances (in accordance with nutrient contents) | 9 |

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 134, *Fertilizers, soil conditioners and beneficial substances*.

This second edition cancels and replaces the first edition (ISO 7851:1983), which has been technically revised.

The main changes are as follows:

- "beneficial substances" and related classifications have been added (Clause 6);
- the "main classification principle" (4.1) and the "auxiliary classification principle" (4.2) have been added;
- definitions have been modified according to ISO 8157;
- Figure A.1 has been modified to reflect the three changes highlighted in this list.

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.

Fertilizers, soil conditioners and beneficial substances — Classification

1 Scope

This document establishes a system of classification for fertilizers, soil conditioners and beneficial substances. The system of classification is in accordance with:

- the nutrient contents of the fertilizer;
- the effect of the fertilizer;
- the type of product; and
- the acidity and alkalinity of the product as a supplement.

It is applicable to fertilizers, soil conditioners and beneficial substances. The classification scheme for fertilizers, soil conditioners and beneficial substances (in accordance with nutrient contents) is shown in $\underbrace{Annex\ A}$.

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 8157, Fertilizers and soil conditioners — Vocabulary

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8157 apply.

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

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at https://www.electropedia.org/

4 Classification for fertilizers

4.1 Main classification principle (in accordance with nutrient contents)

4.1.1 Inorganic fertilizers

4.1.1.1 Overview

This subclause concerns fertilizers without organic material other than those defined as additives.

NOTE Calcium cyanamide, urea and its condensation products and chelated and complex micronutrients (elements) are, by convention, recognized as inorganic fertilizers.