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**Rare earth — Vocabulary —**  
**Part 2:**  
**Metals and their alloys**

*Terres rares — Vocabulaire —*  
*Partie 2: Métaux et alliages*



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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.

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](http://www.iso.org/directives)).

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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](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 298, *Rare earth*.

A list of all parts in the ISO 22444 series can be found on the ISO website.

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](http://www.iso.org/members.html).

## Introduction

Rare earth metals and their alloys are key raw materials for developing high-performance rare earth functional materials, such as hydrogen-storage materials, magnetic materials and superconducting materials, and are widely used in fields such as sustainable energy, robotics and electronic information.

Rare earth metals are also important additive elements for aluminium-base, magnesium-base, copper-base, titanium-base and other alloys.

This document specifies terms for use by producers, consumers and traders in the field of rare earth metals and their alloys. This document will serve as a reference that will help to reduce discrepancies or trade disputes caused by inconsistencies in terms used when dealing with rare earth metals and their alloys.



# Rare earth — Vocabulary —

## Part 2: Metals and their alloys

### 1 Scope

This document defines the terms for rare earth metals and their alloys, as well as for methods of preparation and purification.

This document can be used as a reference to unify technical terms in rare earth production, application, inspection, circulation, trading, scientific research and education.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

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

##### **rare earth impurity**

undesirable rare earth element present in a *rare earth metal* (4.1) or *rare earth alloy* (5.1) other than the specified or target rare earth element(s)

#### 3.2

##### **non-rare earth impurity**

undesirable non-rare earth element present in a *rare earth metal* (4.1) or *rare earth alloy* (5.1)

#### 3.3

##### **interstitial impurity**

undesirable, non-metallic element such as hydrogen, boron, carbon, nitrogen or oxygen occupying interstitial positions in the lattice of a *rare earth metal* (4.1) or *rare earth alloy* (5.1)

#### 3.4

##### **rare earth metal content**

total rare earth metal content

mass fraction of rare earth elements in a *rare earth metal* (4.1) or *rare earth alloy* (5.1)

Note 1 to entry: It is generally provided as a percentage of the metal, i.e. % TREM.