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**Welding consumables — Gases and gas mixtures for fusion welding and allied processes**

*Produits consommables pour le soudage — Gaz et mélanges gazeux pour le soudage par fusion et les techniques connexes*



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## Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees 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 at least 75 % of the member bodies casting a vote.

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.

ISO 14175 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*.

This second edition cancels and replaces the first edition (ISO 14175:1997) which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 3 via your national standards body, a complete listing of which can be found at [www.iso.org](http://www.iso.org).

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# Welding consumables — Gases and gas mixtures for fusion welding and allied processes

## 1 Scope

This International Standard specifies requirements for the classification of gases and gas mixtures used in fusion welding and allied processes including, but not limited to:

- tungsten arc welding (Process 141);
- gas-shielded metal arc welding (Process 13);
- plasma arc welding (Process 15);
- plasma arc cutting (Process 83);
- laser welding (Process 52);
- laser cutting (Process 84);
- arc braze welding (Process 972).

NOTE Process numbers are in accordance with ISO 4063.

The purpose of this International Standard is to classify and designate shielding, backing, process and assist gases in accordance with their chemical properties and metallurgical behaviour as the basis for correct selection by the user and to simplify the possible qualification procedures.

Gas purities and mixing tolerances are specified as delivered by the supplier (manufacturer) and not at the point of use.

Gases or gas mixtures may be supplied in either liquid or gaseous form, but when used for welding and allied processes, the gases are always used in the gaseous form.

Fuel gases, such as acetylene, natural gas, propane, etc., and resonator gases, as used in gas lasers, are not covered by this International Standard.

Transportation and handling of gases and containers shall be in accordance with local, national and regional standards and regulations as required.

## 2 Normative references

The following referenced documents are indispensable for the application 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 31-0:1992, *Quantities and units — Part 0: General principles*