
**Pyrotechnic articles — Pyrotechnic
articles for vehicles —**

Part 10:
**Requirements and categorization for
semi-finished products**

*Articles pyrotechniques — Articles pyrotechniques pour véhicules —
Partie 10: Exigences relatives aux produits semi-finis et leur
classement en catégories*



Reference number
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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.

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 14451-10 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 212, *Pyrotechnic articles*, in collaboration with Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 14451 consists of the following parts, under the general title *Pyrotechnic articles — Pyrotechnic articles for vehicles*:

- *Part 1: Terminology*
- *Part 2: Test methods*
- *Part 3: Labelling*
- *Part 4: Requirements and categorization for micro gas generators*
- *Part 5: Requirements and categorization for airbag gas generators*
- *Part 6: Requirements and categorization for airbag modules*
- *Part 7: Requirements and categorization for seatbelt pretensioners*
- *Part 8: Requirements and categorization for igniters*
- *Part 9: Requirements and categorization for actuators*
- *Part 10: Requirements and categorization for semi-finished products*

Pyrotechnic articles — Pyrotechnic articles for vehicles —

Part 10: Requirements and categorization for semi-finished products

1 Scope

This part of ISO 14451 specifies the types and order of tests to be applied to the semi finished products and sets out the acceptance criteria and means of categorization.

This part of ISO 14451 applies to type tests.

This part of ISO 14451 is not applicable to articles containing military explosives or commercial blasting agents except for black powder or flash composition.

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 14451-1, *Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 1: Terminology*

ISO 14451-2:2013, *Pyrotechnic articles — Pyrotechnic articles for vehicles — Part 2: Test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14451-1 apply.

4 Requirements and acceptance criteria

4.1 General

The semi-finished product shall meet the requirements specified in [4.2](#).

4.2 Verification of design and documentation

Documentation shall be complete as specified in ISO 14451-2:2013, 4.1.

NOTE Additional test results (if available) performed on upper level pyrotechnic articles (assemblies) or sub-level pyrotechnic articles (components) can be evaluated for the conformity assessment of the semi-finished product.

5 Categorization

5.1 Semi-finished products are categorized as follows:

- Category P1: Semi-finished products that present a low hazard;
- Category P2: Semi-finished products that are intended for handling or use only by persons with specialist knowledge.

5.2 The assignment to P1 or P2 is done according to the following criteria:

- P1 criteria: Examination of the documentation proves the article provides low hazard.
- P2 criterion: If P1 criteria are not fulfilled.

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