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**Packaging — Complete, filled transport  
packages — General rules for the  
compilation of performance test  
schedules**

*Emballages — Emballages d'expédition complets et pleins — Règles  
générales pour l'établissement de programmes d'essais d'aptitude  
à l'emploi*



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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 4180 was prepared by Technical Committee ISO/TC 122, *Packaging*, Subcommittee SC 3, *Performance requirements and tests for means of packaging, packages and unit loads (as required by ISO/TC 122)*.

This first edition of ISO 4180 cancels and replaces ISO 4180-1:1980 and ISO 4180-2:1980.

# Packaging — Complete, filled transport packages — General rules for the compilation of performance test schedules

## 1 Scope

This International Standard establishes general rules to be used for the compilation of performance test schedules for complete, filled transport packages intended for use within any distribution system except for the packages used for dangerous goods.

For a known distribution environment with experimental data available (case 1), this International Standard provides guide lines for the compilation of appropriate test schedules.

For an unknown distribution environment (case 2), this International Standard provides test schedules in dependence of the test specimen mass and forecast destination.

This International Standard also gives the factors to be considered in assessing the criteria of acceptance of such packages after they have been subjected to a package performance test schedule.

## 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 2206, *Packaging — Complete, filled transport packages — Identification of parts when testing*

ISO 2233, *Packaging — Complete, filled transport packages and unit loads — Conditioning for testing*

ISO 2234, *Packaging — Complete, filled transport packages and unit loads — Stacking tests using a static load*

ISO 2244, *Packaging — Complete, filled transport packages and unit loads — Horizontal impact tests*

ISO 2248, *Packaging — Complete, filled transport packages — Vertical impact test by dropping*

ISO 2873, *Packaging — Complete, filled transport packages and unit loads — Low pressure test*

ISO 4178, *Complete, filled transport packages — Distribution trials — Information to be recorded*

ISO 8318, *Packaging — Complete, filled transport packages and unit loads — Sinusoidal vibration tests using a variable frequency*

ISO 12048, *Packaging — Complete, filled transport packages — Compression and stacking tests using a compression tester*

ISO 13355:2001, *Packaging — Complete, filled transport packages and unit loads — Vertical random vibration test*

EN 14149, *Packaging — Complete, filled transport packages and unit loads — Impact test by rotational drop*