

INTERNATIONAL STANDARD

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Rubber products — Guidelines for storage

Produits à base d'élastomères — Lignes directrices pour le stockage



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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 2230 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

This second edition cancels and replaces the first edition (ISO 2230:1973), which has been technically revised.

Annex A of this International Standard is for information only.

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Introduction

Many rubber products and components are stored for long periods before being put into service, and thus it is important they are stored in conditions that minimize unwanted changes in properties. Such changes may result from degradation, in which case they may include excessive hardening, softening, cracking, crazing and other surface effects. Other changes may be caused by deformation, contamination or mechanical damage.

In preparing this revision, the requirements of different users and the multiplicity of rubber types and products have been factors of major consideration. It is recognized that some rubbers are more susceptible than others to deterioration by such factors as heat, light, ozone, oxygen and humidity. Exposure to these factors should therefore be minimized in order to extend storage life, and to do so a system of storage control, proper packaging and periodic inspection becomes necessary.

A system of recording, for the proper maintenance of storage and inspection data, is included to assist in verifying that the provisions of this standard are maintained in association with common elements associated with product specifications and their verification through conducting of statistically significant methods of test. Further guidance can be found, to supplement the information contained in this standard, in ISO 9000, ISO 9001 and ISO 9004.

In this standard, only the causes of generation of deleterious influences such as ozone and radiation are mentioned as being prohibited. Methods for measuring concentrations or intensities of these are not within the scope of this standard.

Recommendations are included in annex A for the inspection and testing of specific products.

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Rubber products — Guidelines for storage

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This International Standard gives guidelines for the inspection, recording procedures, packaging and storage of products, assemblies and components made from vulcanized or thermoplastic rubber prior to being put into circulation.

It is applicable to both solid and cellular rubber products prepared from dry raw rubber, latex or other sources. It is not intended for use with raw rubber in bale, liquid (solution or emulsion) or particulate form, storage guidance for which is given in ISO 7664.

The recommendations for packaging form an integral part of the controlled storage procedure, as well as providing means of identifying the material and product.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1629:1995, *Rubber and latices — Nomenclature*

ISO 4591:1992, *Plastics — Film and sheeting — Determination of average thickness of a sample, and average thickness and yield of a roll, by gravimetric techniques (gravimetric thickness)*

3 Terms and definitions

For the purposes of this International Standard, the following terms and definitions apply.

3.1

initial storage period

the maximum period, starting from the time of manufacture, for which a rubber product, appropriately packaged, may be stored under specified conditions before a sample needs to be inspected or re-tested

3.2

extension storage period

the period for which a rubber product, appropriately packaged, may be stored after the initial storage period, before further inspection and re-testing is necessary