
Solar energy — Methods of testing preformed rubber seals and sealing compounds used in collectors

*Énergie solaire — Méthodes d'essai des joints préformés en caoutchouc et
des composés pour l'étanchéité utilisés dans les capteurs (DIS distribué en
version anglaise seulement)*

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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.

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.

International Standard ISO 9953 was prepared by Technical Committee ISO/TC 180, *Solar energy*.

Annex A forms an integral part of this International Standard.

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1 Scope

1.1 This International Standard gives requirements for the classification and testing of rubbers used to seal solar energy collectors in order to aid selection for specific applications.

NOTE Particular rubber applications, when specified, may necessitate other requirements that take precedence over these requirements.

1.2 The design requirements in this International Standard pertain only to permissible deflection of the rubber during thermal expansion or retraction of the seal in use and to the tolerances on dimensions of moulded and extruded seals.

1.3 This International Standard does not include requirements pertaining to geometrical design, fabrication or installation of the seals.

1.4 This International Standard is applicable in conjunction with long-term ageing and weathering tests. However, if long-term tests are performed, it is recommended that ISO 4892-2 be complied with for ageing tests and ISO 877 for accelerated weathering tests and material exposure tests, respectively.

NOTE The environmental conditions, test specimen configuration and any test deviations should be agreed upon between the parties involved. Also, if long-term tests are performed, the specific tests described in this International Standard should be performed before and after long-term testing is carried out.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 37:1994, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties.*

ISO 48:1994, *Rubber, vulcanized or thermoplastic — Determination of hardness (hardness between 10 IRHD and 100 IRHD).*

ISO 188: –¹⁾, *Rubber, vulcanized — Accelerated ageing and heat-resistance tests.*

ISO 471:1995, *Rubber — Temperatures, humidities, and times for conditioning and testing.*

ISO 812:1991, *Rubber, vulcanized — Determination of low-temperature brittleness.*

¹⁾ To be published. (Revision of ISO 188:1982)