INTERNATIONAL STANDARD

ISO 1652

Third edition
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Rubber latex — Determination of apparent viscosity by the Brookfield test method

Latex de caoutchouc — Détermination de la viscosité apparente par la méthode d'essai de Brookfield

Reference number
ISO 1652:2004(E)

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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 1652 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 3, *Raw materials (including latex) for use in the rubber industry*.

This third edition cancels and replaces the second edition (ISO 1652:1985), which has been technically revised, including the addition of an annex on viscosity-measurement methods.

Rubber latex — Determination of apparent viscosity by the Brookfield test method

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 specifies a method for the determination of the apparent viscosity of both natural rubber latex concentrate and synthetic rubber latices by the Brookfield method. The method is also suitable for the determination of the viscosity of natural latices from sources other than *Hevea brasiliensis* and also for compounded latices. Other methods for the determination of viscosity are referred to in Annex A.

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 123, *Rubber latex — Sampling*

ISO 124, *Latex, rubber — Determination of total solids content*

3 Terms and definitions

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

3.1
test sample
a quantity of latex suitable for testing, obtained by straining a laboratory sample

[ISO 123]

4 Principle

The viscosity of a latex sample is determined by means of a viscometer which measures the torque produced on a specific spindle driven by an electric motor to rotate at a constant rotational frequency and at a controlled rate of shear while immersed to a specified depth in the latex. The apparent viscosity is obtained by multiplying the torque reading by a coefficient which depends on the rotational frequency and size of the spindle. Measurements may be made on the undiluted latex or on the latex after dilution to a required total-solids content.

This International Standard relates primarily to the manually operated type of viscometer rather than the digital ones currently produced. Comparative reference is made to the latter where appropriate.

NOTE Other methods exist for the determination of the viscosity of latices and emulsions (see Annex A).