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**Plastics/rubber — Polymer dispersions  
and rubber latices (natural and  
synthetic) — Determination of surface  
tension by the ring method**

*Plastiques/caoutchouc — Dispersions de polymères et latex de  
caoutchouc (naturel et synthétique) — Détermination de la tension  
superficielle par la méthode de l'anneau*



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Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
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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 1409 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 2, *Testing and analysis*.

This fifth edition cancels and replaces the fourth edition (ISO 1409:1995), of which it constitutes a minor revision, primarily concerning updating of references and the deletion of references to the withdrawn standards ISO 842, ISO 1625 and ISO 8962.

# Plastics/rubber — Polymer dispersions and rubber latices (natural and synthetic) — Determination of surface tension by the ring 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 ring method for the determination of the surface tension of polymer dispersions and rubber latices (natural and synthetic).

The method is valid for polymer dispersions and rubber latices with a viscosity less than 200 mPa·s. To achieve this, the dispersion or latex is diluted with water to a mass fraction of total solids of 40 %. If necessary, the solids content is further reduced to ensure that the viscosity is under the specified limit.

The method is also suitable for prevulcanized latices and compounded materials.

## 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*

ISO 705, *Rubber latex — Determination of density between 5 °C and 40 °C*

ISO 1652, *Rubber latex — Determination of apparent viscosity by the Brookfield test method*

ISO 2555, *Plastics — Resins in the liquid state or as emulsions or dispersions — Determination of apparent viscosity by the Brookfield Test method*

ISO 3219, *Plastics — Polymers/resins in the liquid state or as emulsions or dispersions — Determination of viscosity using a rotational viscometer with defined shear rate*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*