

# INTERNATIONAL STANDARD



# 498

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

## Natural rubber latex, concentrated – Preparation of dry films

*Latex de caoutchouc naturel, concentré – Préparation de pellicules sèches*

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**iTeh STANDARD PREVIEW**  
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[ISO 498-1974](https://standards.iteh.ai/catalog/standards/sist/8211f978-8e81-4b09-b590-d9994f13f712/iso-498-1974)

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Descriptors : elastomers, natural rubber, latex, films, preparation.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 45 has reviewed ISO Recommendation R 498 and found it technically suitable for transformation. International Standard ISO 498 therefore replaces ISO Recommendation R 498-1966 to which it is technically identical.

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ISO Recommendation R 498 was approved by the Member Bodies of the following countries :

Australia	Germany	Poland
Austria	Hungary	Spain
Brazil	India	Sweden
Bulgaria	Israel	Switzerland
Canada	Italy	United Kingdom
Chile	Japan	U.S.A.
Colombia	Korea, Rep. of	U.S.S.R.
Czechoslovakia	Netherlands	Yugoslavia
France	New Zealand	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 498 into an International Standard.

# Natural rubber latex, concentrated – Preparation of dry films

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### 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for preparing dry, homogeneous films, substantially free of air bubbles, from natural rubber latex which contains preservative agents and which has been submitted to some type of concentration process.

The procedure is not necessarily suitable for latices from natural sources other than *Hevea brasiliensis* or for compounded latex, vulcanized latex or artificial dispersions of rubber or synthetic rubber latices.

### 2 REFERENCES

ISO 123, *Rubber latex – Sampling.*

ISO 124, *Rubber latices – Determination of total solids content.*

### 3 APPARATUS

**3.1 Suitable mould**, in which the film can be cast, prepared by cementing strips of rigid plastics material 6 mm wide and 1,5 mm thick on a flat piece of glass plate. The surface of the cavity so formed shall be preferably from 125 to 150 mm square. Adhesives suitable for affixing the plastics strips to the glass are epoxide

resin adhesive, and polyvinyl acetate dissolved in methyl ethyl ketone. Such a mould will give dry films about 1 mm thick when filled with latex of 62 % total solids content.

**3.2 Square-mesh gauze**, of polyamide or stainless steel, with a nominal aperture of  $0,18 \pm 0,02$  mm, for filtering the latex.

**3.3 Straight-edge**, wooden or stainless steel, with which to scrape the surface of latex in the mould free of air bubbles.

**3.4 Cabinet or covered space**, clean, dry and dust-free, with a level surface on which to place the mould.

**3.5 Oven**, for drying the film at a temperature not exceeding  $25^{\circ}\text{C}$ .

**3.6 Cellulosic film sheets**, thin, clear and transparent, to cover and protect the dry film.

**3.7 Desiccator or airtight container**, for storing the dry film.

### 4 SAMPLING

Carry out the sampling in accordance with one of the methods specified in ISO 123.

## 5 PROCEDURE

Determine the total solids content of the latex in accordance with ISO 124. If the total solids content is less than or equal to 62 %, prepare the film without dilution of the latex. If the total solids content is greater than 62 %, add distilled water to bring it to that value.

Mix the latex well in the sampling bottle and allow to stand for 5 min. Filter carefully through the gauze (3.2) into a 50 cm<sup>3</sup> glass beaker. Allow to stand for 5 min in the beaker before pouring into the mould. During this period keep the beaker covered in order to minimize surface drying. Scrape the surface of the latex in the beaker free of foam with a piece of filter paper.

Before casting the film, place the mould (3.1) in the position in which the film will be left to dry (see 3.4). Then pour the latex into the mould in a continuous stream while moving the beaker to and fro close to the plate. Pour a slight excess of latex over that required to fill the mould completely. Allow the latex in the mould to stand for 1 min and scrape off the excess with the clean straight-edge

(3.3) by moving it evenly across the mould at a speed of up to 25 mm/s once only.

Allow the cast film to dry in a normal, dust-free atmosphere. After drying at room temperature, dry the film in the oven (3.5) at a temperature not exceeding 35 °C. When sufficiently dry, strip the film from the mould, taking care to handle the surface of the film as little as possible. Turn the film over and place it flat on a piece of thin, clear, transparent cellulosic sheet (3.6). Allow to stand for at least another 24 h at a temperature not exceeding 35 °C and, when dry, cover the remaining side of the film with a similar cellulosic sheet.

In some cases, the dryness of the film can be judged by its clarity. Clarity of the film generally increases as it becomes dry. If it is not possible to judge the dryness visually, dry the film to constant mass at a temperature not exceeding 35 °C in a dry atmosphere.

Store the dry film in the desiccator or airtight container (3.7) to prevent absorption of moisture and keep in a cool place in the dark until required.

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