

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION

### R 498

#### PREPARATION OF DRY FILMS FROM CONCENTRATED NATURAL RUBBER LATEX

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## BRIEF HISTORY

The Draft ISO Recommendation R 498, *Preparation of Dry Films from Concentrated Natural Rubber Latex*, was drawn up by Technical Committee ISO/TC 45, *Rubber*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question by the Technical Committee began in 1957 and led, in 1962, to the adoption of a Draft ISO Recommendation.

In November 1963, this Draft ISO Recommendation (No. 628) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

Argentina	France	New Zealand
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

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council which decided, in September 1966, to accept it as an ISO RECOMMENDATION.

## PREPARATION OF DRY FILMS FROM CONCENTRATED NATURAL RUBBER LATEX

### 1. SCOPE

This ISO Recommendation describes a procedure for preparing dry films 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 latices of synthetic rubber, compounded latex, vulcanized latex or artificial dispersions of rubber.

This ISO Recommendation describes the preparation of dry homogeneous films which are substantially free of air bubbles.

### 2. APPARATUS

The apparatus consists of the following:

- 2.1 *A suitable mould*, in which the film can be cast and which should be 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 should 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 per cent total solids content.
- 2.2 *A straight-edge*, wooden or stainless steel, with which to scrape the surface of latex in the mould free of air bubbles.
- 2.3 *A cabinet or covered space*, clean, dry and dust-free, with a level surface on which to place the mould.
- 2.4 *Cellulosic film sheets*, thin, clear and transparent, to cover and protect the dry films.

### 3. PROCEDURE

The total solids content of the latex is determined. The film should be prepared without dilution of the latex, if the total solids content is 62 per cent or less. If this content is above 62 per cent, distilled water should be added to bring it to that value. The latex is mixed well in the sampling bottle and allowed to stand for 5 min. The latex is filtered carefully through a polyamide or square-mesh stainless steel gauze with a nominal aperture of  $0.18 \pm 0.02$  mm, into a 50 ml glass beaker. The latex is allowed to stand for 5 min in the beaker before being poured into the mould; during this period the beaker is kept covered in order to minimize surface drying. The surface of the latex in the beaker is scraped free of foam with a piece of filter paper. The mould is then placed in the position in which the film should be left to dry, before the film is cast. The latex is poured into the mould in a continuous stream whilst the beaker is moved to and fro close