

## Australian Standard™

AS 1683.1

**Methods of test for elastomers****Method 1: Rubber latex— Sampling**

## PREFACE

This Standard was prepared by the Standards Australia Committee RU-003, Analysis and Testing of Elastomers to supersede AS 1683.1—1974, *Methods of test for rubber*, Method 1: *Sampling of latex*.

The objective of this Standard is to provide manufacturers and users of elastomeric materials with a method for the sampling of natural rubber latex concentrate and synthetic rubber latex.

This Standard is identical with and has been reproduced from ISO 123:2001, *Rubber latex—Sampling*.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number appears on the cover and title page while the International Standard number appears only on the cover.
- (b) In the source text, 'this International Standard' should read this 'Australian Standard'.

References to International Standards should be replaced by the identical or equivalent Australian Standards as follows:

| <i>Reference to International Standard</i> |                                                                       | <i>Australian Standard</i> |                                                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------|
| ISO                                        |                                                                       | AS                         |                                                                                                 |
| 124                                        | Latex, rubber—Determination of total solids content                   | 1683<br>1683.2             | Methods of test for elastomers<br>Method 2: Latex, rubber—Determination of total solids content |
| 706                                        | Rubber, latex—Determination of coagulum content (sieve residue)       | 1683.5                     | Method 5: Coagulum content of rubber latices                                                    |
| 3310                                       | Test sieves—Technical requirements and testing                        | —                          |                                                                                                 |
| 3310-1                                     | Part 1: Test sieves of metal wire cloth                               | —                          |                                                                                                 |
| 15528                                      | Paints, varnishes and raw materials for paints and varnishes—Sampling | —                          |                                                                                                 |

NOTES

**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 procedures for sampling natural rubber latex concentrate and for sampling synthetic rubber latices and artificial latices. It is also suitable for sampling rubber latex contained in drums, tank cars or tanks. The procedures may also be used for sampling plastics dispersions.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 124:1997, *Latex, rubber — Determination of total solids content*.

ISO 706:1985, *Rubber latex — Determination of coagulum content (sieve residue)*.

ISO 3310-1:2000, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*.

ISO 15528:2000, *Paints, varnishes and raw materials for paints and varnishes — Sampling*.

## 3 Terms and definitions

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

### 3.1

#### **lot**

a definite quantity of latex processed or produced under conditions which are presumed uniform

NOTE A lot may be in one or more containers or vessels. For example, it may consist of several drums of latex.

### 3.2

#### **sample**

a quantity of latex that has been drawn from a lot

### 3.3

#### **laboratory sample**

a quantity of latex intended for laboratory inspection and testing and that is representative of the lot

### 3.4

#### test sample

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

NOTE The laboratory sample, not the test sample, is used for the determination of coagulum content (see 6.5.5).

### 3.5

#### test portion

a quantity of latex taken from the test sample (3.4) or laboratory sample (3.3), for the purpose of a single specific test, for example the amount actually weighed out from the test sample for a single determination of total solids content

### 3.6

#### coagulum content/sieve residue

coarse foreign matter and flocculated rubber retained under the conditions of the test (ISO 706) on a filter with average aperture width of  $180\ \mu\text{m} \pm 10\ \mu\text{m}$  complying with ISO 3310-1

NOTE In the context of examination of latex shipments, bulk deliveries, etc., this is what is generally understood by "coagulum". Pieces of latex skin and coagulated rubber should not be included in the laboratory sample.

## 4 Principle

A representative laboratory sample is taken from the bulk of the latex. The test sample is prepared by straining the laboratory sample.

## 5 Apparatus

No part of the equipment to be immersed in the latex shall contain copper.

### 5.1 Stirrer, for homogenization of latex in drums.

For open-headed drums, use either 5.1.1 or 5.1.2. For drums fitted with a bung, see 6.4.1.4.

**5.1.1 Plunger**, consisting of a perforated, chrome-plated or stainless-steel disc of diameter approximately 150 mm, with smooth-edged holes of diameter approximately 10 mm.

**5.1.2 Motor-driven stirrer**, capable of operating at a speed of 5 rad/s to 21 rad/s (50 r/min to 200 r/min).

A suitable type of motor-driven stirrer consists of a stainless-steel propeller of 110 mm minimum diameter, mounted on a stainless-steel shaft sufficiently long for the propeller to be at a distance of about one-tenth the depth of the latex from the bottom of the drum.

If desired, two propellers may be used on the same shaft, in which case the lower one shall meet the foregoing requirements as regards position. The rotational frequency shall be such as to give a brisk turnover without creating a vortex.

**5.1.3 Motor-driven drum roller** (optional, see 6.4.1.5), capable of rotating a drum at approximately 1 rad/s (10 r/min).

**5.2 Sampling devices**, suitable for the removal of an approximately  $1\ \text{dm}^3$  representative sample from a known depth in the latex. Such devices shall be constructed of materials inert to latex.

### 5.2.1 Sampling tubes for latex in drums

Use either 5.2.1.1 or 5.2.1.2.

**5.2.1.1 Sampling tube**, of material inert to the latex, such as glass, stainless steel or inert plastic, having an internal diameter of 10 mm to 15 mm and a length of at least 1 m, open at both ends and having a stopper for closing the upper end while withdrawing it from the latex.