



BSI Standards Publication

**Adhesives for paper and board, packaging and disposable sanitary products — Determination of foam formation for aqueous adhesives**

**National foreword**

This British Standard is the UK implementation of EN 12704:2016. It supersedes BS EN 12704:2012 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/52, Adhesives.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

**EN 12704**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 83.180

Supersedes EN 12704:2012

English Version

## Adhesives for paper and board, packaging and disposable sanitary products - Determination of foam formation for aqueous adhesives

Adhésifs pour papier, carton, emballage et produits  
sanitaires jetables - Détermination de la formation de  
mousse des adhésifs aqueux

Klebstoffe für Papier, Verpackung und  
Hygieneprodukte - Bestimmung der Schaumbildung  
von wässrigen Klebstoffen

This European Standard was approved by CEN on 6 May 2016.

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<b>Contents</b>		Page
<b>European foreword</b> .....		<b>3</b>
<b>Introduction</b> .....		<b>4</b>
<b>1</b>	<b>Scope</b> .....	<b>5</b>
<b>2</b>	<b>Normative references</b> .....	<b>5</b>
<b>3</b>	<b>Terms and definitions</b> .....	<b>5</b>
<b>4</b>	<b>Principle</b> .....	<b>5</b>
<b>5</b>	<b>Apparatus</b> .....	<b>5</b>
<b>6</b>	<b>Procedure</b> .....	<b>6</b>
<b>7</b>	<b>Expression of results</b> .....	<b>7</b>
<b>8</b>	<b>Test report</b> .....	<b>7</b>
<b>Bibliography</b> .....		<b>8</b>

## European foreword

This document (EN 12704:2016) has been prepared by Technical Committee CEN/TC 193 “Adhesives”, the secretariat of which is held by AENOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12704:2012.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Introduction

**SAFETY STATEMENT** — Persons using this document should be familiar with the normal laboratory practice, if applicable. This document 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 regulatory conditions.

**ENVIRONMENTAL STATEMENT** — It is understood that some of the material permitted in this standard may have negative environmental impact. As technological advantages lead to acceptable alternatives for these materials, they will be eliminated from this standard to the extent possible.

At the end of the test, the user of the standard should take care to carry out an appropriate disposal of the wastes, according to local regulation.

## 1 Scope

This European Standard specifies a test method to determine the foam formation, or air entrainment during rapid stirring of aqueous adhesives with a maximum viscosity of 10 000 MPa·s at room temperature determined in accordance with EN 12092.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 923, *Adhesives - Terms and definitions*

EN 1067, *Adhesives - Examination and preparation of samples for testing*

EN ISO 15605, *Adhesives - Sampling (ISO 15605)*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 923 apply.

## 4 Principle

The adhesive is stirred under defined conditions and the foam formation determined from the differences between the initial and final volumes of the adhesive.

## 5 Apparatus

Specimens shall be conditioned for 24 h at 23 °C and 50 % RH.

- 5.1 **Stirrer motor**, capable of driving the stirrer at an adjustable rotary speed up to 3 000 min<sup>-1</sup>.
- 5.2 **Stirrer**, with dimensions as shown in Figure 1.
- 5.3 **Beaker**, 2 l, of transparent material of approximately dimensions,  $h = 230$  mm,  $d = 105$  mm.
- 5.4 **Balance**, accuracy  $\pm 1,0$  g.
- 5.5 **Mechanical system**, to secure the stirrer and beaker.
- 5.6 **Timer**, accuracy  $\pm 1$  s.
- 5.7 **Ruler**, accuracy  $\pm 1$  mm.