



SLOVENSKI STANDARD
SIST EN 1720:2000
01-maj-2000

Adhesives for paper and board, packaging and disposable sanitary products -
Determination of dispersability

Klebstoffe für Papier, Verpackung und Hygieneprodukte - Bestimmung der
Dispergierbarkeit

Adhésifs pour papier et carton, emballages et produits sanitaires consommables -
Détermination de l'aptitude à la dispersion

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Ta slovenski standard je istoveten z: **EN 1720:1998**

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ICS:

83.180 Lepila Adhesives

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EUROPEAN STANDARD

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NORME EUROPÉENNE

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English version

Adhesives for paper and board, packaging and disposable sanitary products - Determination of dispersability

Adhésifs pour papier et carton, emballages et produits
sanitaires consommables - Détermination de l'aptitude à la
dispersion

Klebstoffe für Papier, Verpackung und Hygieneprodukte -
Bestimmung der Dispergierbarkeit

This European Standard was approved by CEN on 4 September 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard 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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This European Standard specifies a method for the determining the dispersability of dry adhesive in a dispersing medium. The test can be applied to all types of adhesives covered by this series of standards and include soluble, dispersion and hot melt systems.

The test is intended primarily as a comparative test for investigating the dispersability performance of different adhesives and should not be used to provide accurate data regarding the water resistance of the adhesives in their finished bonded state.

Test conditions have been left open so that they can be adapted to suit the end use of the adhesive and the possible subsequent recyclability of the substrate/adhesive combination.

2 Normative References

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 827	Adhesives - Determination of conventional solids content and constant mass solids content
EN 923	Adhesives - Terms and definitions
EN 1066	Adhesives - Sampling
EN 1067	Adhesives - Examination and preparation of samples for testing

3 Definitions

For the purposes of this standard, the definitions in accordance with EN 923 and the following definition apply:

3.1 dispersability: The ability of an adhesive film to be broken up into small particles or dissolved when agitated in a liquid.

4 Principle

Dry adhesive is stirred in a dispersing medium (for example, water) under defined conditions and the percentages of the dispersed and undispersed adhesive are calculated.

5 Safety

Persons using this standard shall be familiar with normal laboratory practice.

This standard does not purport to address all the safety problems, if any, associated with its use.

It is the responsibility of the user to establish safety and health practices and to ensure compliance with any European and national regulatory conditions.

6 Apparatus

6.1 Magnetic stirrer, with hot plate

6.2 Suitable container, for example, 1,5 l beaker

6.3 Balance, to an accuracy of 0,01 g

6.4 Release film, for example, untreated polyethylene or silicone release paper

6.5 Suitable filter

NOTE: For solubilised systems such as starches, dextrans and polyvinyl alcohols, a filter paper can be suitable. However, for filled and dispersion systems a fine mesh (for example, 100 μm) is recommended.

6.6 Laboratory oven, capable of maintaining a selected temperature to an accuracy of $\pm 2^\circ\text{C}$

7 Method

Take a sample of the product to be tested in accordance with EN 1066. Examine and prepare this sample for testing in accordance with EN 1067.

Prepare films of adhesive by coating onto the release film so that the final film has a dry coating weight of $(500 \pm 50) \text{ g/m}^2$. At least 3 films shall be prepared.

Dry the films at room temperature between 18 $^\circ\text{C}$ and 28 $^\circ\text{C}$ for 24 h. Where water retention of the film is high, further drying at 60 $^\circ\text{C}$ approximately to constant weight in a laboratory oven can be required.

Remove the adhesive film from the release film, then crumble or cut it. If cut, the size of the pieces shall be 100 mm^2 .

Weigh approximately 5 g of the crumbled adhesive (w_1) into 1 l of the dispersing medium in the container and stir continuously at the preselected dispersing temperature for 1,5 h with magnetic stirrer.

After 1,5 h, immediately pass the liquid through a filter of known weight (w_2) and dry the filter together with the retained material at 60 $^\circ\text{C}$ to constant weight (w_3) in laboratory oven in accordance with EN 827.

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8 Expression of results

Express the results as follows:

$$\text{a) Percentage of dispersed material} = \frac{w_1 - (w_3 - w_2)}{w_1} \times 100$$

$$\text{b) Percentage of undispersed material} = \frac{w_3 - w_2}{w_1} \times 100$$

9 Test report

The following information shall be included in the test report:

- a) a reference to this European Standard;
- b) manufacturer's name, grade and batch number or other means of uniquely identifying the adhesive samples;
- c) drying temperature of adhesive film;
- d) description of the dispersing medium (that is, chemical type, pH, concentration);
- e) temperature of dispersion test;
- f) type of filter;
- g) number of tests carried out;
- h) date of test;
- i) any other factors which affect the results.

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