

Adhesives — Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application —

Part 1: General procedure

ICS 83.180

National foreword

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This publication is not to be regarded as a British standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion into a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee PRI/52, Adhesives, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

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

Cross-references

The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

This Draft for Development, having been prepared under the direction of the Sector Committee for Materials and Chemicals, was published under the authority of the Standards Committee and comes into effect on 15 August 2001

Summary of pages

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English version

**Adhesives - Short term method for measuring the emission
properties of low-solvent or solvent-free adhesives after
application - Part 1: General procedure**

This European Prestandard (ENV) was approved by CEN on 7 March 2001 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

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Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 193 "Adhesives", the secretariat of which is held by AENOR.

This Prestandard consists of four parts:

- Part 1: General procedure.
- Part 2: Determination of volatile organic compounds.
- Part 3: Determination of volatile aldehydes.
- Part 4: Determination of volatile diisocyanates.

Annex A is normative.

Annex B is informative.

This Prestandard includes a Bibliography.

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

Introduction

Solvent-free and low-solvent adhesives can show considerable long-term emissions of volatile chemical compounds. Any documentation of the emission characteristics requires a test method which includes all relevant and potentially hazardous substances.

The test should:

- be reliable and reproducible
- give results in a short time to be useful for decisions for development projects
- verify that carcinogenic or sensitising volatile substances are absent
- characterise the emission properties of the adhesive

This can be achieved by sampling the atmosphere around the applied adhesive kept in an environmental test chamber at controlled ambient conditions.

1 Scope

This European Prestandard describes a conventional standard method for assessing the potential emissions from adhesives after their application.

This Prestandard applies only to "solvent free" and "low solvent" adhesives as they are defined in EN 923. The adhesives shall be applicable at room temperature.

2 Normative references

This European Prestandard 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 Prestandard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 923	Adhesives - Terms and definitions
EN 1066	Adhesives - Sampling
EN 1067	Adhesives - Examination and preparation of samples for testing
ENV 13419-1	Building products - Determination of the emission of volatile organic compounds - Part 1: Emission test chamber method.
ISO 554	Standard atmospheres for conditioning and/or testing – Specifications
ISO/DIS 16000-6:2000	Indoor Air- Part 6: Determination of volatile organic compounds in indoor and chamber air by active sampling on TENAX TA, thermal desorption and gas-chromatography MSD/FID.

3 Terms and definitions

For the purposes of this Prestandard, the terms and definitions given in EN 923, ENV 13419-1, ISO/DIS 16000-6:2000 and the following term and definition apply.

3.1

specific cumulative emission (SCE)

total volatile organic compounds (TVOC) per unit of test area emitted in the time interval between 24 h and 240 h

4 Principle

The test determines the emissions of volatile substances from adhesive coatings. Very volatile and mainly particle bound compounds are not detected with the described procedures. The test is performed in an emission test chamber (Figure 1) at specified constant temperature, relative humidity, air mixing and air exchange.

A measurement of the concentrations of the compounds of interest in the air of the exhaust pipe is considered representative of the air in the whole test chamber.