

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

## Part 1: General procedure

The European Standard EN 13999-1:2006 has the status of a British Standard

ICS 83.180

## National foreword

This British Standard is the UK implementation of EN 13999-1:2006, incorporating corrigendum October 2007. It supersedes DD ENV 13999-1:2001 which is withdrawn.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.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 29 September 2006

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| Amd. No.                   | Date             | Comments                                                     |
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| 17516<br>Corrigendum No. 1 | 31 December 2007 | In Annex B, Clause <b>B.2</b> , replacement of equation [B7] |
|                            |                  |                                                              |
|                            |                  |                                                              |
|                            |                  |                                                              |

English Version

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

Adhésifs - Méthode de mesurage rapide des  
caractéristiques émissives des adhésifs à teneur faible ou  
nulle en solvant après application - Partie 1 : Mode  
opératoire général

Klebstoffe - Kurzzeit-Verfahren zum Messen der  
Emissionseigenschaften von lösemittelarmen oder  
lösemittelfreien Klebstoffen nach der Applikation - Teil 1:  
Allgemeines Verfahren

This European Standard was approved by CEN on 1 August 2006.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 13999-1:2006) 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 2007, and conflicting national standards shall be withdrawn at the latest by February 2007.

This document supersedes ENV 13999-1:2001.

EN 13999, under the general title “Adhesives – Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application”, consists of the following parts:

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

### Safety statement

Persons using this document should be familiar with the principles of normal laboratory. 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 ensure compliance with any regulatory conditions.

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

## Introduction

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

The test shall:

- 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 Standard describes a conventional standard method for assessing potential emissions from adhesives after their application.

This European Standard 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

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

EN 923:2005, *Adhesives — Terms and definitions*

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

EN ISO 15605, *Adhesives — Sampling (ISO 15605:2000)*

EN ISO 16000-9:2006, *Indoor air — Part 9: Determination of the emission of volatile organic compounds from building products and furnishing — Emission test chamber method (ISO 16000-9:2006)*

ENV 13999-2, *Adhesives — Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application — Part 2: Determination of volatile organic compounds*

ENV 13999-3, *Adhesives — Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application — Part 3: Determination of volatile aldehydes*

ENV 13999-4, *Adhesives — Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application — Part 4: Determination of volatile diisocyanates*

ISO 554, *Standard atmospheres for conditioning and / or testing — Specifications*

ISO 16000-6:2004, *Indoor air — Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA sorbent, thermal desorption and gas chromatography using MS/FID*