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# 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

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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 2: Determination of volatile organic compounds

Adhésifs - Méthode de courte durée de mesurage des propriétés d'émission des adhésifs à faible teneur en solvants ou exempts de solvants après application - Partie 2: Dosage des composés organiques volatils

Klebstoffe - Kurzzeit-Verfahren zum Messen der Emissionseigenschaften von lösemittelarmen oder lösemittelfreien Klebstoffen nach der Applikation - Teil 2: Bestimmung flüchtiger organicher Verbindungen

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# Foreword

This document ENV 13999-2:2002 has been prepared by Technical Committee CEN/TC 193, "Adhesives", the secretariat of which is held by AENOR.

This document 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Prestandard specifies a method for the determination of single volatile organic compounds (VOC's) and of the total amount of volatile organic compounds in the exhaust air of an emission test chamber after application of an adhesive ($TVOC_{ENV13999}$). The method is based on use of a solid sorbent with subsequent desorption and gas chromatographic analysis. The method is applicable to measurement of non-polar and slightly polar VOC's.

## 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 1232, *Workplace atmospheres - Pumps for personal sampling of chemical agents - Requirements and test methods.*

ENV 13999-1, *Adhesives - Short term method for measuring the emission properties of low-solvent or solvent-free adhesives after application - Part 1: General procedure.*

ENV 13419-1, *Building products - Determination of the emission of volatile organic compounds - Part 1: Emission test chamber method.*

EN ISO 16017-1:2000, *Indoor, ambient and workplace air - Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography - Part 1: Pumped sampling (ISO 16017-1:2000).*

ISO/DIS 16000-6, *Indoor air - Part 6: Determination of volatile organic compounds in indoor and chamber air by active sampling on TENAX TA sorbent, thermal desorption and gas chromatography using MSD/FID.*

## 3 Principle

An emission test chamber as described in ENV 13999-1 or in ENV 13419-1 shall be used.

A sufficient volume of test chamber air is drawn with an appropriate flow through one (or more) sorbent tubes in series containing a solid sorbent. Volatile organic compounds (VOC's) are retained by the sorbent tube, which is subsequently analysed in the laboratory. The VOC's are desorbed from the sampling tube and transferred by a flow of inert carrier gas into a capillary gas chromatograph coupled to a mass spectrometric detector (MS) and to a flame ionisation detector (FID) or only to a mass spectrometric detector.

## 4 Safety

This Prestandard does not purport to address all of the safety concerns, if any associated with its use. The user of this Prestandard should be familiar with common laboratory practice including general safety measures. It is the responsibility of the user of this Prestandard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.