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Paints and varnishes - Determination of volatile organic compounds(VOC) and/or semi volatile organic compounds (SVOC) content - Part 2: Gas-chromatographic method (ISO 11890-2:2020)

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NATIONAL FOREWORD

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.07.2020.	Date of Availability of the European standard is 08.07.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 87.040

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11890-2

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English Version

Paints and varnishes - Determination of volatile organic compounds(VOC) and/or semi volatile organic compounds (SVOC) content - Part 2: Gas-chromatographic method (ISO 11890-2:2020)

Peintures et vernis - Détermination de la teneur en composés organiques volatils (COV) et/ou composés organiques semi-volatils (COSV) - Partie 2: Méthode par chromatographie en phase gazeuse (ISO 11890-2:2020)

Beschichtungsstoffe - Bestimmung des Gehaltes an flüchtigen organischen Verbindungen (VOC-Gehalt) und des Gehaltes an halbflüchtigen organischen Verbindungen (SVOC-Gehalt) - Teil 2: Gaschromatographisches Verfahren (ISO 11890-2:2020)

This European Standard was approved by CEN on 28 May 2020.

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 CEN-CENELEC Management Centre or to any CEN member.

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Ref. No. EN ISO 11890-2:2020 E

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European foreword

This document (EN ISO 11890-2:2020) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 “Paints and varnishes” the secretariat of which is held by DIN.

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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

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 ISO 11890-2:2013.

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

Endorsement notice

The text of ISO 11890-2:2020 has been approved by CEN as EN ISO 11890-2:2020 without any modification.

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Contents

Page

Foreword ..... **v**
Introduction ..... **vi**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **2**
4 Principle **4**
5 Required information **4**
6 Apparatus **4**
7 Reagents **7**
8 Procedure **8**
8.1 Sampling 8
8.2 Analysis 8
8.2.1 Sample preparation 8
8.2.2 Data acquisition for sample measurement 8
8.3 Calibration 9
8.3.1 General 9
8.3.2 Preparation of calibration solutions 9
8.3.3 Analysis of the multi-point calibration 9
8.4 Quality assurance 10
8.5 Gas chromatographic conditions 10
8.6 Density 10
8.7 Water content 10
9 Data analysis **11**
9.1 Integration and identification of compounds 11
9.2 Classification of compounds 13
10 Quantitative determination of compound content **15**
10.1 General 15
10.2 Quantitative determination of compound content 17
10.2.1 Quantification with respect to CSRF 17
10.2.2 Quantification with respect to surrogate standard 17
11 Calculation of VOC and SVOC content **17**
11.1 General 17
11.2 Method 1 — VOC content and/or SVOC content, as a percentage by mass, of the product “ready for use” 18
11.3 Method 2 — VOC content and/or SVOC content, in grams per litre, of the product “ready for use” 18
11.4 Method 3 — VOC content and/or SVOC content, in grams per litre, of the product “ready for use” less water 19
11.5 Method 4 — VOC content and/or SVOC content, in grams per litre, of the product “ready for use” less water and less exempt compounds 19
12 Data evaluation and calculation of final results **20**
13 Precision **21**
13.1 General 21
13.2 Repeatability limit, *r* 21
13.3 Reproducibility limit, *R* 21
14 Test report **21**
Annex A (normative) **Non-exhaustive list of VOC, SVOC and NVOC compounds** **22**

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Annex B (informative) **Information on thermal unstable products** **28**
Annex C (informative) **Examples for GC method conditions** **35**
Annex D (informative) **Results of the round robin test for the determination of precision data** **37**
Bibliography **39**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 11890-2:2013), which has been technically revised.

The main changes compared to the previous edition are as follows:

— the scope has been expanded to include the determination of semi volatile organic compounds (SVOC);

— the scope has been expanded to include concentration ranges from 0,01 % to 100 %;

— the specifications for determination of semi-volatile organic compounds have been added.

A list of all parts in the ISO 11890 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document is one of a series of standards dealing with the sampling and testing of coating materials and their raw materials. It specifies a method for the determination of the volatile organic compounds (VOC) content and the semi-volatile organic compounds (SVOC) content of coating materials and their raw materials.

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Paints and varnishes — Determination of volatile organic compounds(VOC) and/or semi volatile organic compounds (SVOC) content —

Part 2:
Gas-chromatographic method

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1 Scope

This document is applicable for the determination of VOC and SVOC with an expected VOC and/or SVOC content greater than 0,01 % by mass up to 100 % by mass.

The method given in ISO 11890-1 is used when the VOC is greater than 15 % by mass. This document (method ISO 11890-2) applies when the system contains VOC and SVOC as the VOC result of ISO 11890-1 can be influenced by the SVOC. For VOC content smaller than 0,1 %, the head space method described in ISO 17895 is used as an alternative. ISO 11890-1 and ISO 17895 cannot be used for the determination of the SVOC content.

NOTE 1 Some ingredients of coating materials and their raw materials can decompose during analysis and cause artificial VOC and/or SVOC signals. When determining VOC and/or SVOC for coating materials and their raw materials, these signals are artefacts of the method and are not taken into account (examples are given in Annex B).

This method assumes that the volatile matter is either water or organic. However, other volatile inorganic compounds can be present and might need to be quantified by another suitable method and allowed for in the calculations. The method defined in this document is not applicable for determination of water content.

NOTE 2 If organic acids or bases and their corresponding salts are present in the coating material or its raw materials, the amount that is quantified by this method might not be accurate due to a change in the acid or base equilibrium.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 760, *Determination of water — Karl Fischer method (General method)*

ISO 1513, *Paints and varnishes — Examination and preparation of test samples*

ISO 2811 (all parts), *Paints and varnishes — Determination of density*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

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