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Paints and varnishes - Electro-deposition coatings -
Part 8: Electric charge density (ISO 22553-8:2020)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 22553-8:2021 sisaldab Euroopa standardi EN ISO 22553-8:2021 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 22553-8:2021 consists of the English text of the European standard EN ISO 22553-8:2021.
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 and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.09.2021.	Date of Availability of the European standard is 01.09.2021.
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ICS 87.040

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EUROPEAN STANDARD

EN ISO 22553-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

Paints and varnishes - Electro-deposition coatings - Part 8: Electric charge density (ISO 22553-8:2020)

Peintures et vernis - Peintures d'électrodéposition -
Partie 8: Charge électrique volumique (ISO 22553-
8:2020)

Beschichtungsstoffe - Elektrotauchlacke - Teil 8:
Abscheideäquivalent (ISO 22553-8:2020)

This European Standard was approved by CEN on 23 August 2021.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of ISO 22553-8:2020 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 22553-8:2021 by 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of an identical text or by endorsement, at the latest by March 2022, and conflicting national standards shall be withdrawn at the latest by March 2022.

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.

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Endorsement notice

The text of ISO 22553-8:2020 has been approved by CEN as EN ISO 22553-8:2021 without any modification.

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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*, Subcommittee SC 9, *General test methods for paints and varnishes*.

A list of all parts in the ISO 22553 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.

Introduction

The electric charge density provides information about the efficiency of the deposition process during electro-deposition coating.

If measurement of the electrical wet-film resistance in accordance with ISO 22553-7 is necessary, this can be specified in the test assembly provided.

Paints and varnishes — Electro-deposition coatings —

Part 8: Electric charge density

1 Scope

This document specifies a method for determining the electric charge density of an electro-deposition coating (e-coat) for automotive industries and other general industrial applications, e.g. chiller units, consumer products, radiators, aerospace, agriculture.

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 1514, *Paints and varnishes — Standard panels for testing*

ISO 2808, *Paints and varnishes — Determination of film thickness*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 22553-1, *Paints and varnishes — Electro-deposition coatings — Part 1: Vocabulary*

ISO 23321, *Solvents for paints and varnishes — Demineralized water for industrial applications — Specification and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618, ISO 22553-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

electric charge density

volume electric charge

ρ_A

quotient of electrical charge Q and volume V :

$$\rho_A = \frac{Q}{V}$$

Note 1 to entry: The electric charge density is expressed in coulombs per cubic metre ($\text{C}\cdot\text{m}^{-3}$).

Note 2 to entry: $1 \text{ C}\cdot\text{m}^{-3} = 1 \text{ A}\cdot\text{s}\cdot\text{m}^{-3}$.