



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 22553-3:2020

Paints and varnishes - Electro-deposition coatings - Part 3: Compatibility of electro-deposition coating materials with a reference oil (ISO 22553-3:2019)

**I.S. EN ISO 22553-3:2020**

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## National Foreword

I.S. EN ISO 22553-3:2020 is the adopted Irish version of the European Document EN ISO 22553-3:2020, Paints and varnishes - Electro-deposition coatings - Part 3: Compatibility of electro-deposition coating materials with a reference oil (ISO 22553-3:2019)

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*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

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EUROPEAN STANDARD

**EN ISO 22553-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2020

ICS 87.040

English Version

**Paints and varnishes - Electro-deposition coatings - Part 3:  
Compatibility of electro-deposition coating materials with  
a reference oil (ISO 22553-3:2019)**

Peintures et vernis - Peintures d'électrodéposition -  
Partie 3: Compatibilité des peintures  
d'électrodéposition avec d'une huile référence (ISO  
22553-3:2019)

Beschichtungsstoffe - Elektrotauchlacke - Teil 3:  
Verträglichkeit von Elektrotauchlacken mit einem  
Referenzöl (ISO 22553-3:2019)

This European Standard was approved by CEN on 30 November 2020.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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

**EN ISO 22553-3:2020 (E)**

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## **European foreword**

The text of ISO 22553-3:2019 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 22553-3:2020 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 June 2021, and conflicting national standards shall be withdrawn at the latest by June 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.

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## **Endorsement notice**

The text of ISO 22553-3:2019 has been approved by CEN as EN ISO 22553-3:2020 without any modification.

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**INTERNATIONAL  
STANDARD**

**ISO  
22553-3**

First edition  
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**Paints and varnishes —  
Electro-deposition coatings —**

**Part 3:  
Compatibility of electro-deposition  
coating materials with a reference oil**

*Peintures et vernis — Peintures d'électrodéposition —  
Partie 3: Compatibilité des peintures d'électrodéposition avec d'une  
huile référence*



Reference number  
ISO 22553-3:2019(E)

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**ISO 22553-3:2019(E)**



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## ISO 22553-3:2019(E)

### 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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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](http://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](http://www.iso.org/members.html).

## **Introduction**

In practice, surface-reactive substances often contaminate the electro-deposition coating material inside the tank. These contaminants could be materials that are used in downstream production processes, e.g. forming additives, corrosion protection oils and chain lubricants.

These surface-active substances can lead to surface defects in the e-coat and/or subsequent coats.

Test methods for the determination of the compatibility of electro-deposition coating materials with liquid, paste-like and solid foreign substances, which influence the properties of the electro-deposition coating, are described in ISO 22553-4.



# Paints and varnishes — Electro-deposition coatings —

## Part 3:

# Compatibility of electro-deposition coating materials with a reference oil

## 1 Scope

The document specifies a method for the determination of the compatibility of electro-deposition coating materials with a reference oil.

It is applicable to electro-deposition coatings 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 13076, *Paints and varnishes — Lighting and procedure for visual assessments of coatings*

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

#### **surface active agent**

surfactant

substance that affects the interfacial or surface tension markedly, when present in very low concentrations

[SOURCE: ISO 2080:2008, 3.187]

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