



NSAI
Standards

Irish Standard
I.S. EN ISO 19403-1:2020

Paints and varnishes - Wettability - Part 1: Terminology and general principles (ISO 19403-1:2017)

I.S. EN ISO 19403-1:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 19403-1:2020 is the adopted Irish version of the European Document EN ISO 19403-1:2020, Paints and varnishes - Wettability - Part 1: Terminology and general principles (ISO 19403-1:2017)

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EUROPEAN STANDARD

EN ISO 19403-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2020

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English Version

Paints and varnishes - Wettability - Part 1: Terminology and general principles (ISO 19403-1:2017)

Peintures et vernis - Mouillabilité - Partie 1:
Terminologie et principes généraux (ISO 19403-
1:2017)

Beschichtungsstoffe - Benetzbarkeit - Teil 1: Begriffe
und allgemeine Grundlagen (ISO 19403-1:2017)

This European Standard was approved by CEN on 4 November 2019.

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EN ISO 19403-1:2020 (E)

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European foreword

The text of ISO 19403-1:2017 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 19403-1:2020 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of an identical text or by endorsement, at the latest by August 2020, and conflicting national standards shall be withdrawn at the latest by August 2020.

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Endorsement notice

The text of ISO 19403-1:2017 has been approved by CEN as EN ISO 19403-1:2020 without any modification.

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**INTERNATIONAL
STANDARD**

**ISO
19403-1**

First edition
2017-06

**Paints and varnishes — Wettability —
Part 1:
Terminology and general principles**

Peintures et vernis — Mouillabilité —

Partie 1: Terminologie et principes généraux



Reference number
ISO 19403-1:2017(E)

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ISO 19403-1:2017(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).

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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 19403 series can be found on the ISO website.

Paints and varnishes — Wettability —

Part 1: Terminology and general principles

1 Scope

The ISO 19403 series specifies optical test methods

- for the measurement of the contact angle,
- for the determination of the free surface energy of a solid surface, including the polar and dispersive fractions,
- for the determination of the surface tension of liquids, including the polar and dispersive fractions, and
- for the checking of the measurement arrangement with reference materials.

It can be applied for the characterization of substrates, coatings and coating materials.

The applicability can be restricted for liquids with non-Newtonian rheology¹⁾.

This document specifies terms and definitions and defines the general principles.

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 4618, *Paints and varnishes — Terms and definitions*

3 Terms and definitions

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

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 Determination of the surface free energy

3.1.1

chemical homogeneity

chemically homogeneous composition of a surface to be examined

Note 1 to entry: The definition regards a purely qualitative assessment of the surface. Regarding the measurement of the contact angle, a surface is considered chemically and topologically sufficiently homogeneous if no significant differences of the contact angles can be determined when measuring on several areas on the surface. The significance limits can be specified by the user in accordance with standard laboratory methods.

1) This term is defined in DIN 1342-1.

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