



International
Standard

ISO 19403-6

**Paints and varnishes —
Wettability —**

Part 6:
**Measurement of dynamic advancing
and receding angle by changing the
volume of a drop**

Peintures et vernis — Mouillabilité —

*Partie 6: Mesurage des angles d'avancée et de recul dynamiques
en changeant le volume d'une goutte*

**Second edition
2024-10**

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 19403-6:2024](https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024)

<https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	2
5 Apparatus and materials.....	2
6 Sampling.....	3
7 Procedure.....	4
7.1 General for measuring on the horizontal drop.....	4
7.1.1 Setting up the contact angle measuring system.....	4
7.1.2 Test conditions.....	4
7.1.3 Conditioning of the test panels.....	4
7.1.4 Conditioning of the test liquids.....	4
7.2 Measurement.....	4
7.2.1 General.....	4
7.2.2 Measuring method.....	5
7.2.3 Determination of the contact angle.....	5
8 Evaluation.....	5
9 Test report.....	8
Annex A (informative) Notes on sampling and treatment of test specimens.....	10
Bibliography.....	11

iTech Standards
<http://standards.iteh.ai>
 Document Preview

[ISO 19403-6:2024](https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024)

<https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024>

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 document 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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for 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 second edition cancels and replaces the first edition (ISO 19403-6:2017), which has been technically revised.

The main changes are as follows:

- the part title has been changed to: Measurement of dynamic advancing and receding angle by changing the volume of a drop;
- the term [3.2](#) “advancing angle” has been replaced by “dynamic advancing contact angle” and the definition has been reworded;
- the term [3.3](#) “receding angle” has been replaced by “dynamic receding contact angle” and the definition has been reworded;
- normative references have been updated.

A list of all parts in the ISO 19403 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

Dynamic contact angles describe the processes on the interface liquid or solid during volume increase (dynamic advancing contact angle) or volume decrease (dynamic receding contact angle) of a drop. As an alternative to the static method (see ISO 19403-2), the dynamic advancing or dynamic receding methods measure the contact angle while the three-phase contact line is moving. The contact angle for the dynamic advancing contact angle is measured while wetting a previously unwetted surface. For the dynamic receding contact angle, the contact angle is observed during dewetting. By determining the difference between the dynamic advancing contact angle and the receding contact angle, information on chemical homogeneity and roughness can be concluded. The dynamic receding contact angle is not recommended for the determination of the surface energy.

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 19403-6:2024](https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024)

<https://standards.iteh.ai/catalog/standards/iso/905b75cd-e3cb-4fbb-af29-40434627f533/iso-19403-6-2024>

