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

Reference number
ISO 19403-6:2024(en)

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Published in Switzerland

Contents

Page

Foreword

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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*, 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— the term 3.2 “advancing angle” has been replaced by “dynamic advancing contact angle” and the definition has been reworded;

— the term 3.3 “receding angle” has been replaced by “dynamic receding contact angle” and the definition has been reworded;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.

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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.