



BSI Standards Publication

**Determination of the film thickness of coatings
using an ultrasonic gage (ISO/TS 19397:2015)**

National foreword

This Published Document is the UK implementation of CEN ISO/TS 19397:2018. It is identical to ISO/TS 19397:2015.

The UK participation in its preparation was entrusted to Technical Committee STI/10, Test methods for paints.

A list of organizations represented on this committee can be obtained on request to its secretary.

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ICS 87.040

English Version

Determination of the film thickness of coatings using an ultrasonic gage (ISO/TS 19397:2015)

Détermination de l'épaisseur du feuillet de revêtement
par mesurage ultrasons (ISO/TS 19397:2015)

Bestimmung der Schichtdicke von Beschichtungen
mittels Ultraschallmessung (ISO/TS 19397:2015)

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European foreword

The text of ISO/TS 19397:2015 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 CEN ISO/TS 19397:2018 by Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

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Endorsement notice

The text of ISO/TS 19397:2015 has been approved by CEN as CEN ISO/TS 19397:2018 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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The committee responsible for this document is ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

Determination of the film thickness of coatings using an ultrasonic gage

1 Scope

This Technical Specification describes a method for determining the film thickness of coating on metallic and non-metallic substrates using an ultrasonic gauge.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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.

3.1

ultrasonic wave

acoustic wave having a frequency higher than the range of audibility of the human ear, generally taken as higher than 20 kHz

[SOURCE: EN 1330-4:2010, 3.1.1]

3.2

longitudinal wave

compressional wave

wave in which the particle motion in a material is in the same direction as the propagation of the wave

[SOURCE: EN 1330-4:2010, 3.2.1]

3.3

echo

ultrasonic pulse reflected to the probe

[SOURCE: EN 1330-4:2010, 5.5.2]

3.4

echo height

echo amplitude

height of an *echo* (3.3) indication on the screen

[SOURCE: EN 1330-4:2010, 5.5.5]

3.5

ultrasonic impulse

short-lived ultrasound signal

3.6

ultrasonic sensor

ultrasonic probe

device for sending and receiving *ultrasonic waves* (3.1), mostly based on piezoelectric materials