

Small craft - Airborne sound emitted by powered recreational craft - Part 3: Sound assessment using calculation and measurement procedures (ISO 14509-3:2009)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 14509-3:2018 sisaldab Euroopa standardi EN ISO 14509-3:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 14509-3:2018 consists of the English text of the European standard EN ISO 14509-3:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 26.09.2018.	Date of Availability of the European standard is 26.09.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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EUROPEAN STANDARD

**EN ISO 14509-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 47.080; 17.140.30

Supersedes EN ISO 14509-3:2009

English Version

**Small craft - Airborne sound emitted by powered  
recreational craft - Part 3: Sound assessment using  
calculation and measurement procedures (ISO 14509-  
3:2009)**

Petits navires - Bruit aérien émis par les bateaux de  
plaisance motorisés - Partie 3: Évaluation du bruit à  
l'aide de procédures de calcul et de mesure (ISO  
14509-3:2009)

Kleine Wasserfahrzeuge - Von motorgetriebenen  
Sportbooten abgestrahlter Luftschall - Teil 3:  
Beurteilung der Schallemission mittels Rechen- und  
Messverfahren (ISO 14509-3:2009)

This European Standard was approved by CEN on 16 April 2018.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

## European foreword

The text of ISO 14509-3:2009 has been prepared by Technical Committee ISO/TC 188 “Small craft” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 14509-3:2018.

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 March 2019, and conflicting national standards shall be withdrawn at the latest by March 2019.

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.

This document supersedes EN ISO 14509-3:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2013/53/EU.

For relationship with EU Directive 2013/53/EU, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## Endorsement notice

The text of ISO 14509-3:2009 has been approved by CEN as EN ISO 14509-3:2018 without any modification.

## Annex ZA (informative)

### Relationship between this European Standard and the Essential Requirements of Directive 2013/53/EU aimed to be covered

This European standard has been prepared under a Commission's standardization request M/542 C(2015) 8736 final to provide one voluntary means of conforming to Essential Requirements of Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

**Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2013/53/EU**

Essential Requirements of Directive 2013/53/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex I, Part C, 1 - Essential requirements for noise emissions; Noise emission levels	4, 5, 6, Annex A, Annex B	<p>This standard is applicable for powered mono hull craft with a Froude number greater than 1.1; it is not applicable for personal watercraft (PWC).</p> <p>Manufacturers and builders should be aware that the assessment methodology use in this standard is based on specific craft types and may be unsuitable for craft that have characteristics that are significantly different from those listed in the introduction to this standard.</p> <p>This standard does not specify the information to be provided in the Owner's Manual in accordance with Annex I.C.2</p>

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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## Introduction

The European Union Directive 2003/44/EC (Amendment to Directive 94/25/EC) introduces limits for sound emission from recreational craft and requires conformity for certain types of craft to be shown by using the ISO 14509 series. ISO 14509-1 provides a practical measurement method, ISO 14509-2 provides an assessment method using reference craft and this part of ISO 14509 provides a predictive measurement method based on the work of the SoundBoat project. SoundBoat was funded by the European Commission and various European Marine Industry Associations and industrial partners to develop alternative methods of testing sound emission from recreational craft. Over the two years of the project, more than 65 craft have been tested according to the ISO 14509-1 pass-by test. From this an algorithm has been developed that uses a combination of hull-water sound, derived from hull parameters, and exhaust outlet sound, derived by direct measurement on board the craft under test, to predict the sound pressure level that would be observed at 25 m had the craft undergone pass-by testing according to ISO 14509-1. The method specified in this part of ISO 14509 does not require a measurement platform to be established and testing can be carried out independently of location and weather restrictions. This method does not require a list of reference craft to be established and provides a reproducible assessment procedure comparable to ISO 14509-1 pass-by testing to within 2 dB.

The SoundBoat project has concentrated on specific craft types and has only tested craft with the following characteristics:

- bottom type configuration of not more than two chines;
- square transom configuration;
- length of hull 11 m or greater.

The SoundBoat project was successfully completed in early 2005, but industry continues to gather data from on-water testing and, as the data model is refined with further validation of the concept, the parameters above will be revised appropriately. The SoundBoat project team do not believe that craft outside the above characteristics are unsuitable for assessment using this part of ISO 14509; however, where a significantly different craft is to be assessed, it might be beneficial to test according to ISO 14509-1.