

ANSI S3.40-2002
ISO 10819:1996

AMERICAN NATIONAL STANDARD

Mechanical vibration and shock—Hand-arm vibration—Method for the measurement and evaluation of the vibration transmissibility of gloves at the palm of the hand

(A Nationally Adopted International Standard)

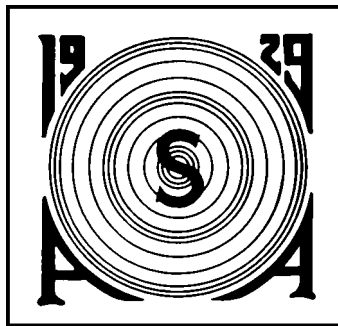
NAIS STANDARD
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Accredited Standards Committee S3, Bioacoustics

Standards Secretariat
Acoustical Society of America
35 Pinelawn Road, Suite 114E
Melville, NY 11747-3177

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A Nationally Adopted International Standard

Secretariat

Acoustical Society of America (ASA)

Approved April 26, 2002

American National Standards Institute, Inc. (ANSI)

Abstract

This Nationally Adopted International Standard specifies a method for the laboratory measurement, the data analysis and reporting of the vibration transmissibility of gloves in terms of vibration transmission from a handle to the palm of the hand in the frequency range from 31.5 Hz to 1250 Hz.

The standard is intended to define a screening test for the vibration transmission through gloves. It is recognized that many factors influence the transmission of vibration through gloves. Therefore the transmissibility value according to this standard is not sufficient to assess the health risk due to vibration.

The transmissibility of vibration is measured and reported for two input spectra, which are representative of the vibration of some tools, and may be reported as a function of frequency.

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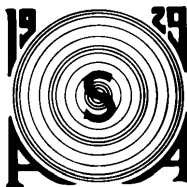
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Contents

	Page
Foreword	iii
1 Scope	1
2 Normative references	1
3 Definitions	2
4 Symbols and abbreviations	2
5 Measuring principle and equipment	3
6 Measurement conditions and procedure	6
7 Evaluation of results	11
8 Test report	12

Annexes

A Mathematical definition of vibration test signals	13
B Example of handle with gripping force measuring system	14
C Third-octave band spectra of vibration test signals	15
D Bibliography	17
ZA Clauses of this European Standard addressing essential requirements or other provisions of EU Directives or	17

Tables

1 Acceleration values and tolerances of vibration spectra M and H ..	10
A.1 Cut-off frequencies f_c and constant factors c for vibration spectra	13
C.1 Spectrum M	15
C.2 Spectrum H	15

Figures

1 Schematic diagram for measurement of vibration transmissibility ..	3
2 Adaptor for holding accelerometer in the palm of the hand	4
3 Definition of gripping force to be measured (top view)	5
4 Posture of the operator during measurements	8
5 Position of hand with handle and adaptor (top view)	8
6 Spectra of the two vibration signals (M and H) measured on the handle	9
7 Principle of determination of mean corrected transmissibility	11
B.1 Example of handle with gripping force measuring system	14
C.1 Spectra M and H	16

Foreword

[This foreword is not part of the Nationally Adopted International Standard (NAIS), Mechanical vibration and shock – Evaluation of human exposure to whole body vibration – Part 1: General requirements, ANSI S3.18-2002, ISO 2631-1:1997.]

This Nationally Adopted International Standard (NAIS) comprises a part of a group of definitions, standards, and specifications for use in acoustical work. It has been adopted by the American National Standards Institute utilizing the Accredited Standards Committee Procedures, under the Secretariat of the Acoustical Society of America.

Accredited Standards Committee S3, Bioacoustics, under whose jurisdiction this NAIS Standard was adopted, has the following scope:

Standards, specifications, methods of measurement and test, and terminology in the fields of psychological and physiological acoustics, including aspects of general acoustics, shock, and vibration which pertain to biological safety, tolerance and comfort.

This Standard is identical to International Standard ISO 2631-1:1997, Mechanical vibration and shock – Evaluation of human exposure to whole body vibration, which was prepared by Technical Committee ISO/TC 108, Mechanical vibration and shock, Subcommittee SC 4, Human exposure to Mechanical vibration and shock.

At the time this NAIS Standard was submitted to Accredited Standards Committee S3, Bioacoustics, for final approval, the membership was as follows:

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Working Group S3-39, Human Exposure to Mechanical Vibration and Shock, which assisted Accredited Standards Committee S3, Bioacoustics, in the preparation of this Standard, had the following membership:

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Suggestions for improvement of this Standard will be welcomed. They should be made in writing to Accredited Standards Committee S3, Bioacoustics, in care of the Standards Secretariat, Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177.

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1 Scope

This European Standard specifies a method for the laboratory measurement, the data analysis and reporting of the vibration transmissibility of gloves in terms of vibration transmission from a handle to the palm of the hand in the frequency range from 31,5 Hz to 1250 Hz.

The standard is intended to define a screening test for the vibration transmission through gloves. It is recognised that many factors influence the transmission of vibration through gloves. Therefore the transmissibility value according to this standard is not sufficient to assess the health risk due to vibration.

The transmissibility of vibration is measured and reported for two input spectra, which are representative of the vibration of some tools, and may be reported as a function of frequency.

2 Normative References

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 420	General requirements for gloves
ENV 25349	Mechanical vibration – Guidelines for the measurement and the assessment of human exposure to hand-transmitted vibration (ISO 5349:1986)
ENV 28041	Human response to vibration – Measuring instrumentation (ISO 8041:1990)
EN 61260	Electroacoustics - Octave-band and fractional-octave-band filters (IEC 1260:1995)
ISO 2041	Vibration and shock – Vocabulary
ISO 5805	Mechanical vibration and shock affecting man – Vocabulary