



ANSI E1.26 – 2006 (R2012)
Entertainment Technology
Recommended Testing Methods and
Values for
Shock Absorption of Floors Used in
Live Performance Venues

Floors/2004-8002r3.2a

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worldwide standards for the entertainment industries

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Recommended Testing Methods and
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The PLASA Technical Standards Program

The PLASA Technical Standards Program was created to serve the PLASA membership and the entertainment industry in technical standards related matters. The goal of the Program is to take a leading role regarding technology within the entertainment industry by creating recommended practices and standards, monitoring standards issues around the world on behalf of our members, and improving communications and safety within the industry. PLASA works closely with the technical standards efforts of other organizations within our industry, including USITT and VPLT, as well as representing the interests of PLASA members to ANSI, UL, and the NFPA. The Technical Standards Program is accredited by the American National Standards Institute.

The Technical Standards Council (TSC) was established to oversee and coordinate the Technical Standards Program. Made up of individuals experienced in standards-making work from throughout our industry, the Council approves all projects undertaken and assigns them to the appropriate working group. The Technical Standards Council employs a Technical Standards Manager to coordinate the work of the Council and its working groups as well as maintain a "Standards Watch" on behalf of members. Working groups include: Control Protocols, Electrical Power, Floors, Fog and Smoke, Followspot Position, Photometrics, Rigging, and Stage Lifts.

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The Floors Working Group, which authored this Standard, consists of a cross section of entertainment industry professionals representing a diversity of interests. PLASA is committed to developing consensus-based standards and recommended practices in an open setting.

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Interest category codes:

CP = custom-market producer	DE = designer
DR = dealer rental company	G = general interest
MP = mass-market producer	U = user

Table of Contents

Acknowledgments.....	iv
Table of Contents.....	v
1 Scope.....	1
2 Definitions - Types of Floors.....	1
3 Requirements.....	1
4 Test Methods.....	1
4.1 General.....	1
4.2 Shock Absorption Test.....	1
4.2.1 Test equipment.....	2
4.2.2 Standard Deformation.....	4
4.2.3 Implementation.....	5
4.2.4 Analysis.....	5
4.3 Deformation depression, W_x	6
4.3.1 General information.....	6
4.3.2 Test equipment.....	6
4.3.3 Measuring instrument.....	6
4.3.4 Implementation.....	6
5 Recommendations.....	8
5.1 Uniformity of properties.....	8
5.2 Environmental compatibility.....	8
5.3 Reporting values.....	8
Appendix A.....	9
A.1 Surface-elastic floors with elastic construction.....	9
A.1.1 Key.....	9
A.1.2 Location of the system measurement points.....	9
A.2 Surface-elastic floors with elastic construction.....	10
A.2.1 Key.....	10
A.2.2 Location of the system measurement points.....	11
A.3 Surface-elastic dance floors with an elastic layer.....	12
A.3.1 Key.....	12
A.3.2 Location of the system measurement points.....	12
Appendix B.....	14
Appendix C.....	15

1 Scope

This document sets out the energy absorption requirements for floors in venues used for live performances, and the methods for testing them. This document is to be used in conjunction with all applicable local building codes and requirements.

2 Definitions - Types of Floors

2.1 Surface elastic floors consist of an elastic layer, a rigid load distribution layer and a top surface. These floors generally have a harder surface and respond well to rolling loads.

2.2 Point elastic floors consist of an elastic layer and a top surface. The top surface is generally considered softer, and they do not respond well to rolling loads.

2.3 Area elastic floors combine the characteristics of both surface elastic and point elastic floor construction. These floors consist of an elastic layer, a load distribution layer and an elastic layer with a top surface. These floors provide point impact protection, yet respond well to rolling loads.

2.4 Rigid floors consist of a top layer with little or no elastic construction.

3 Requirements

The requirements are based on the following criteria. All of these requirements shall be taken into consideration in their entirety, with no one requirement outweighing any other:

- a. Performance floors represent a significant functional component
- b. Performance floors provide significant protection to performers
- c. These floors may, by design, have a reduced load bearing capacity

4 Test Methods

4.1 General

Performance tests shall be conducted by the manufacturer and the results provided to the end user.

4.1.1 Test sections of the floor shall be a minimum of 2.5 m X 3.5 m (8' x 12'), with at least one joint between sections.

4.1.2 Tests shall be conducted on a floor with a slope of less than 1/4" per foot rise per foot of run.

4.1.3 All tested pieces shall be acclimated to the expected ambient conditions per the manufacturer's recommendations prior to testing. Temperature and humidity conditions at the time of testing shall be recorded.

4.1.4 A minimum of 5 points (as defined in Appendix A) shall be tested, the values recorded, and an average value computed. The high, low, and average values shall be reported. Additional points may be tested and used to compute the average value.

4.2 Shock Absorption Test

Shock absorption is determined by analyzing two measurements taken using the apparatus shown in Figure 1. These two measurements are taken at each designated test point. Each point shall be tested a