



# AMERICAN NATIONAL STANDARD

*ANSI/ASSE A1264.2 – 2012  
Provision of Slip Resistance  
on Walking/Working Surfaces*

ANSI/ASSE A1264.2 – 2012



AMERICAN SOCIETY OF  
SAFETY ENGINEERS

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**ANSI/ASSE A1264.2 – 2012**

**American National Standard**

**Provision of Slip Resistance  
on Walking/Working Surfaces**

Secretariat

**American Society of Safety Engineers**  
1800 East Oakton Street  
Des Plaines, Illinois 60018-2187

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**American National Standards Institute, Inc.**

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## **Foreword** (This Foreword is not a part of American National Standard A1264.2 – 2012.)

As an accredited standard developer, ASSE was approved to act as secretariat for the development of the standard. The American National Standard A1264.1-1995: *Safety Requirements for Workplace Floor and Wall Openings, Stairs and Railing Systems*, as well as many regional model-building codes, OSHA regulations and other ANSI standards use the term slip resistance. The perceived need for this standard was to further define the term slip resistance, and to set forth common and accepted practices for providing reasonably safe walking/working surfaces. A1264.2 has taken a step in addressing this need and formalizing a voluntary consensus standard, which would allow businesses and industry to advance the art of measuring slip resistance on walking/working surfaces, thereby enabling safer workplaces.

The scientific investigation of pedestrian safety, by measuring the frictional resistances of walkway surfaces/materials to obtain data and aid in the formulation of a walkway safety code in the U.S., began in the 1920's by R.B. Hunter under project A-22 of the American Standards Association (now ANSI), with subsequent research study fellowships at the National Bureau of Standards (now the National Institute for Standards and Technology - NIST). Subsequently, there have been numerous scientific studies of pedestrian safety, and many slip resistance testing devices have been developed. Additional standards and related research initiatives have also been undertaken by universities, consensus writing bodies, testing and research facilities, and independent researchers. These studies ultimately produced more questions than answers. However, one common problem was the difficulty in developing an acceptable tribometric device, which would produce valid, reliable and reproducible results in a field setting under both wet and dry conditions.

The phenomena of adhesion (involving dry surfaces) and sticktion (involving wet surfaces) are associated with devices that sit on a surface for a period of time before slipping occurs (known as residence time or dwell time). Dwell times as short as 0.2 seconds have been known to result in these phenomena. Adhesion and sticktion can result in higher slipmeter readings than would be obtained on the same surface if testing occurs when the test foot and the walkway surfaces make contact with no dwell time. This difference is especially evident under wet conditions. Devices that avoid sticktion by applying the horizontal and vertical force components simultaneously (thereby avoiding residence time) make them suitable for testing under wet as well as dry conditions.

There are three basic areas addressed in the standard: 1) provisions for reducing hazards; 2) test procedures and equipment; and 3) slip resistance guidelines. The committee is aware of standards activities, which have been in development for many years with regard to test procedures and equipment, and opted to reference those standards in keeping with the advancements in this area. The E11.2 section of the standard is offered as a guideline, which goes a step beyond that which has previously been considered to be vague and ambiguous.

The intent of this standard is to help in the reduction of falls due to conditions, which in some fashion are manageable. The standards committee offers this standard as the state of the art, however continuing developments are to be expected, and revisions of the standard will be necessary as tribometric science progresses. It is felt, however, that guidelines and recommendations are very much needed and that the standard in its present form provides for the minimum performance requirements necessary for increased safety on walking/working surfaces in the workplace.

At the time the ANSI A1264.2 standard was approved as an American National Standard; the A1264 Accredited Standards Committee consisted of the following members:

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## AMERICAN NATIONAL STANDARD A1264.2 PROVISION OF SLIP RESISTANCE ON WALKING/WORKING SURFACES

### STANDARD REQUIREMENTS

### EXPLANATORY INFORMATION

*(Not part of American National Standard A1264.2)*

#### 1. PREFACE

Falls are a leading cause of accidental deaths in the United States. Workplace falls are significant because falls can (1) result in serious injuries, and (2) cause other secondary accidents. Many falls from elevation are initiated by slip occurrences. The most common event leading to a slip is the unexpected loss of traction between the footwear bottom and floor material. Slip resistance of a walkway surface is often a key consideration in safety and the prevention of slips and falls.

Environments requiring more physically intensive tasks generally require a higher level of traction. Slip and fall accidents can be associated with several major factors or conditions such as:

- Floor surface characteristics affecting slip resistance;
- Footwear traction properties;
- Environmental factors (e.g., contaminants such as water, oil);
- Human factors (e.g., gait, human activity, psychological and physiological conditions of the walker).

This standard addresses the first three factors, which are more readily controlled by management.

#### 2. SCOPE, PURPOSE AND APPLICATION

**E2** For additional information about safety requirements for walking/working surfaces and their access, refer to ANSI A1264.1. Trips are a prominent cause of falls and are also addressed in A1264.1, ASTM F1637 and ANSI/ICC A117.1.

**2.1 Scope.** This standard sets forth provisions for protecting persons where