



Designation: **E1542 – 10 E1542 – 18**

## Standard Terminology Relating to Occupational Health and Safety<sup>1</sup>

This standard is issued under the fixed designation E1542; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 The terms in this standard are used in the fields of occupational health and of safety. The terms are used to describe the limits of exposure under different conditions, the meanings of terms used in describing events and the types of items measured. They will commonly be used to express the effect of an event or the limit of a chemical exposure on human beings. This terminology standard provides a compilation of consensus definitions of terms used in ASTM occupational safety and health standards.

1.2 This terminology standard does not purport to be an exhaustive lexicon. Rather it defines terms relevant to occupational health and safety.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

[C162 Terminology of Glass and Glass Products](#)

~~E594~~[E1132 Practice for Safety and Health Requirements Relating to Occupational Exposure to Ozone-Respirable Crystalline Silica](#) (Withdrawn 1990)

[E1575 Practice for Pressure Water Cleaning and Cutting](#)

[E2238 Guide for Evacuation Route Diagrams](#)

~~E752~~[E2349 Practice for Safety and Health Requirements Relating to Occupational Exposure to Carbon Disulfide Requirements in Metal Casting Operations: Sand Preparation, Molding, and Core Making; Melting and Pouring; and Cleaning and Finishing](#) (Withdrawn 1995)

~~E848~~[E2350 Guide for Safety and Health Requirements Relating to Occupational Exposure to Water-Insoluble Chromates Integration of Ergonomics/Human Factors into New Occupational Systems](#)

[E2523 Terminology for Metalworking Fluids and Operations](#)

~~E849~~[E2565 Practice for Guide for Consensus-based Process for an Occupational Safety and Health Requirements Relating to Standard that Includes an Occupational Exposure to Asbestos Guideline](#) (Withdrawn 1991)

~~E1132~~[E2625 Practice for Health Requirements Relating to Controlling Occupational Exposure to Respirable Crystalline Silica for Construction and Demolition Activities](#)

~~E1156~~[E2875 Practice for Health Requirements for Occupational Exposure to Synthetic Amorphous Silica Guide for Personal Protective Equipment for the Handling of Flat Glass](#) (Withdrawn 1999)

~~E2523~~[E2920 Terminology for Metalworking Fluids and Operations Guide for Recording Occupational Injuries and Illnesses](#)

[F1494 Terminology Relating to Protective Clothing](#)

### 3. Terminology

3.1 Health and safety terms specific to metalworking fluids and the metalworking environment are found in Terminology [E2523](#).

3.2 *Generic Terms and their/Their Definitions:*

<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee [E34](#) on Occupational Health and Safety and is the direct responsibility of Subcommittee [E34.01](#) on Terminology.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

3.2.1 *ceiling limit*—an exposure which shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, then the ceiling limit shall be assessed as a 15-min time-weighted average exposure which shall not be exceeded at any time over a working day, except for substances which cause immediate irritation upon short exposure.

3.2.2 *occupational exposure limit XXXXX, “generic”*—the maximum ~~time weighted~~ time-weighted average (TWA) concentration to which nearly all workers may be repeatedly subjected for a normal 8- to 10-h workday, 40-h workweek, without known adverse health effects.

3.2.3 *short-term exposure limit (STEL)*—the 15-min time-weighted average exposure which shall not be exceeded at any time during a ~~work day, workday,~~ even if the ~~Occupational Exposure Limit~~ occupational exposure limit is not exceeded. Exposures above the ~~Occupational Exposure Limit~~ occupational exposure limit up to the STEL should not be longer than ~~15 min-15 min~~ and should not occur more than ~~4~~ four times per day. The minimum interval between these exposures should be 60 min.

### 3.2.3.1 *Discussion*—

The phrase “nearly all workers” only excludes those who are ~~hyper-sensitive~~ hypersensitive to substance exposure or who have known medical conditions which may be aggravated by substance exposure. Thus, most workers are included in the group in which no adverse health effects are expected. The phrase “a normal 8- to 10-h 10-h workday, 40-h workweek” refers to the type of work being done, that is, what is usually done from one week to the next or one day to the next. It does not refer to length of working time as being the major consideration.

The following specified periods of time must be addressed either by determining a value or by stating the “time” is not addressed:

- a) ~~workday (number of hours specified)~~
    - (1) ~~Workday (number of hours specified),~~
    - (2) ~~Workweek (number of hours specified),~~
    - (3) ~~Lifetime (that is, cumulative), and~~
    - (4) ~~Very short-term maximum (for example, short-term exposure limit, ceiling, etc.).~~
  - b) ~~workweek (number of hours specified)~~
  - c) ~~lifetime (that is, cumulative)~~
  - d) ~~very short term maximum (for example, short-term exposure limit, ceiling, etc.)~~
- Other specified periods of time *may* be addressed.

### 3.3 *Terminology Based on Existing E34 Standards:*

3.3.1 *finishing, v*—attainment of a desired surface finish or finish characteristics by such means as abrasive impingement, grinding, or polishing. **E2349**

3.3.2 *fixed barrier guard, n*—securely attached physical barrier, not readily removable, that prevents entry of any part of the body into the hazard zone by reaching through, over, under, or around the barrier. **E2349**

3.3.3 *flame detector, n*—device which senses the absence or presence of flame, for the purpose of controlling fuel line valves. **E2349**

3.3.4 *flask, n*—container, without top or bottom, used to contain the sand or other media while it is being formed. It is made in two or more parts; the lower part is called the “drag” and the upper part is called the “cope.” Intermediate sections, if any, are called “cheeks.” **E2349**

3.3.5 *flask lifting device, n*—chains, rods, bails, cables, slings, and other materials used to support a load such as a flask for turning, inverting, or transporting. **E2349**

3.3.6 *flat glass, n*—general term covering glass in its annealed state, such as sheet glass, lite of glass, float glass, various forms of rolled glass, and raw products derived from glass. **E2875**

### 3.3.6.1 *Discussion*—

This definition is not intended to apply to heat-tempered or laminated glass products. With heat-tempered or laminated glass products, refer to your local risk assessment.

3.3.7 *fuel-fired equipment (enclosed), n*—specially heated chamber such as core oven, drying oven, thermal sand reclamation, sand heater, or annealing oven. **E2349**

3.3.8 *jamming (hooking), v*—jamming (hooking) occurs when the work rest becomes improperly adjusted to such an extent that the work piece is pulled between the abrasive wheel and the leading edge of the work rest by the grinding action of the wheel, resulting in possible injury to personnel. **E2349**

### 3.3.8.1 *Discussion*—