



Designation: F3028 – 24

# Standard Guide for Training of Search and Rescue Personnel Operating in the Alpine Environment (Alpine Endorsement)<sup>1</sup>

This standard is issued under the fixed designation F3028; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This guide establishes the minimum training, including general and field knowledge, skills, and abilities, for search and rescue personnel who conduct operations in an alpine environment.

1.2 An Alpine Endorsement is intended only for those individuals capable of operating in the extreme conditions of the alpine environment, at altitudes that are likely to have a negative impact on human physiology.

1.2.1 Specifically, Alpine Endorsed individuals may, under qualified supervision, perform their normal duties safely and effectively in an alpine environment.

1.2.2 In addition, Alpine Endorsed individuals may, under qualified supervision, perform their normal duties safely and effectively in mountainous terrain alone.

1.3 An Alpine Endorsement alone is not sufficient to indicate that an individual has the knowledge, skills, and/or abilities to perform any specific duties, including search and rescue operations, other than those defined in this guide.

1.4 This guide alone does not provide the minimum training requirements for performing operations in partially or fully collapsed structures, in or on water, in confined spaces, or underground (such as in caves, mines, and tunnels).

1.5 An Alpine Endorsed individual may be a member of a Mountainous or Alpine Land Search Team or Task Force or Group, as defined in Classification F1993.

1.6 Alpine Endorsed SAR personnel must work under qualified supervision as deemed appropriate by the Authority Having Jurisdiction (AHJ).

1.7 *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.*

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee F32 on Search and Rescue and is the direct responsibility of Subcommittee F32.03 on Personnel, Training and Education.

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1.8 *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>

F1993 Classification System of Human Land Search and Rescue Resources

F2209 Guide for Training of Land Search Team Member

F2752 Guide for Training for Basic Rope Rescuer Endorsement

F3027 Guide for Training of Personnel Operating in Mountainous Terrain (Mountain Endorsement)

F3068 Guide for Contents and Use of a Position Task Book (PTB)

F3222 Terminology Relating to F32 Land Search and Rescue Standards and Guides

### 2.2 NWCG Publication:<sup>3</sup>

PMS 304-2 Fitness and Work Capacity

## 3. Terminology

### 3.1 Definitions of Terms Specific to This Standard:

3.1.1 *exposure, n*—the degree to which a person is exposed on a high, sheer, and unsheltered rock face.

3.1.2 *technical ice axe, n*—as defined by the Union Internationale des Associations d'Alpinisme (UIAA), a Type T ice tool (the UIAA Technical type) with higher strength for use in all circumstances, but especially for ice climbing, dry tooling, etc., and which meets the requirements of UIAA 152 or CEN EN 13089:2011.

3.1.3 *traditional, or trad, climbing, n*—a style of rock climbing in which the person ascending places all gear required

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

<sup>3</sup> Available from National Wildfire Coordinating Group (NWCG) at www.nwcg.gov/publications/304-2.

to protect against falls (chocks, cams, pitons, etc.) and removes it when a route is complete.

3.2 For definitions of other terms used in this guide, see Terminology [F3222](#), Guide [F2209](#), and Guide [F2752](#).

#### 4. Significance and Use

4.1 This guide establishes a minimum standard for training of SAR personnel who conduct operations in an alpine environment.

4.1.1 Alpine Endorsed individuals are required to have, at a minimum, the knowledge, skills, and abilities pertaining to safe movement individually, or as a member of a team, in an alpine environment.

4.1.2 Every person who is identified as Alpine Endorsed shall meet the requirements of this guide.

4.1.3 Alpine Endorsed individuals shall be entitled to add the prefixes “Alpine Endorsed” and “Mountain Endorsed” to their current training levels.<sup>4</sup>

4.2 This guide only establishes the minimum knowledge, skills, and abilities required for a person to operate in an alpine environment as a part of a larger team. No other skills are included or implied.

4.3 An Alpine Endorsement indicates that a person is qualified to operate safely and effectively in the alpine environment in his or her normal area of operations.

4.3.1 An Alpine Endorsement alone does not indicate that an individual possesses adequate field skills and knowledge to make mission-critical decisions.

4.4 This guide is an outline of the topics required for training or evaluating an Alpine Endorsed individual, and may be used to assist in the development of a training document or program.

4.5 This guide can be used to evaluate a document to determine if its content includes the topics necessary for training individuals to operate in the alpine environment. Likewise, this guide can be used to evaluate an existing training program to see if it meets the requirements in this guide.

4.6 The knowledge, skills, and abilities presented in the following sections are not in any particular order and do not represent a training sequence.

4.7 This guide does not stand alone and must be used with other ASTM standards to identify the knowledge, skills, and abilities needed to conduct search and/or rescue in the alpine environment.

4.8 Though this guide establishes only minimum standards, it does not imply that an Alpine Endorsed individual is a “trainee,” “probationary,” or other similarly termed member of an organization.

4.8.1 The AHJ is responsible for determining the requirements and qualifications for its team member ratings.

4.8.2 Nothing in this guide precludes an AHJ from adding additional requirements for its own members.

4.9 An Alpine Endorsed individual shall document his or her training by completion of a position task book compliant with Guide [F3068](#), or by field demonstration under qualified supervision.

4.10 Where proficiency in a skill or ability must be demonstrated, unless stated otherwise it shall be demonstrated for initial qualification and as often as required by the AHJ.

#### 5. General Knowledge

5.1 The AHJ shall verify that an Alpine Endorsed person possesses both attitude and aptitude for working in an alpine environment:

5.1.1 The individual must demonstrate the ability to function effectively in highly exposed locations at high altitude and in extreme conditions;

5.1.2 The individual must be able to move safely and effectively anywhere in the terrain and conditions normal to that environment.

5.2 Alpine Endorsed individuals shall demonstrate knowledge of the following:

5.2.1 The differences between wilderness travel, mountain travel, and alpine travel.

5.2.2 Human functional and survival needs in cold, windy, and wet environments, including:

5.2.2.1 Clothing (suitable for all four seasons);

5.2.2.2 Shelter, both emergency and extended stay;

5.2.2.3 Nutrition;

5.2.2.4 Hydration;

5.2.2.5 Hygiene;

5.2.2.6 Sanitation;

5.2.2.7 Individual and team safety issues specific to operating in an alpine environment.

5.3 Alpine Endorsed individuals shall demonstrate the ability to manage the following medical conditions at a basic wilderness first aid level:<sup>5</sup>

5.3.1 Acute mountain sickness (AMS);

5.3.2 High altitude pulmonary edema (HAPE);

5.3.3 High altitude cerebral edema (HACE);

5.3.4 Hypothermia;

5.3.5 Snow blindness;

5.3.6 Frostbite.

5.4 Risks and hazards specific to the alpine environment, and methods for avoiding or mitigating them. Such risks and hazards include:

5.4.1 Personal fall;

5.4.2 Rock fall;

5.4.3 Ice and/or snow fall;

5.4.4 Severe and rapidly changing weather;

5.4.5 Avalanches;

5.4.6 Rapidly rising water and flash floods.

5.5 Alpine Endorsed individuals shall have, at a minimum, American Institute for Avalanche Research and Education

<sup>4</sup> This guide includes all of the knowledge, skills, and abilities defined in Guide [F3027](#).

<sup>5</sup> Johnson, D. E., et al., “Minimum Guidelines and Scope of Practice for Wilderness First Aid,” *Wilderness & Environmental Medicine*, Vol 24, No. 4, 2013, pp. 456–462.