American National Standard Minimum Requirements for Workplace First Aid Kits and Supplies

1. Scope and Purpose

This standard establishes minimum performance requirements for first aid kits and their supplies that are intended for use in various work environments. Because each work environment is unique, it is expected that the required products will be supplemented with additional supplies and quantities based upon the consultation and recommendation of a person competent in first aid and cognizant of the hazards found in the particular work environment and upon the number of persons who may need first aid at one time. Persons determining the content of first aid kits should additionally consult federal, state and local requirements regarding the types and quantities of material to be included.

2. Compliance

To be in compliance with this standard, first aid kits must contain the required supplies of Section 6.1 and meet all other applicable requirements in their entirety. This standard anticipates that additional first aid supplies will be included to augment the kit, based upon the specific hazards existing in a particular work environment. The inclusion of workplace-specific first aid supplies does not, in and of itself, place a first aid kit outside the purview of this standard. A first aid kit containing a recommended supply that is specifically addressed by this standard must comply with the minimum performance criteria established for such supplies under Section 6.2.

The choice of first aid supplies should be made by a person competent in first aid and cognizant of the hazards found in the particular work environment.

All labeling and marking requirements of this standard represent the manufacturer's declaration of compliance with this standard. The accuracy of the claim is therefore solely the responsibility of the party marking the product. All labeling and markings shall be legible and permanent. Where adhesive labels are used they shall not be easily removed.

3. Definitions

Analgesic. Medications approved by the FDA as pain reliever/fever reducer for over-the-counter use.

Antiseptic. A substance that inhibits the growth of microorganisms on human skin.

Bandage. A strip of material used to cover a wound or hold a compress in place.

Breathing Barrier. A personal safety device that prevents any contact between the CPR adminstrator and the victim. Also known as a CPR barrier.

Compress. A sterile absorbent pad.

First Aid. Immediate treatment administered to an injured person when professional medical care is not readily available.

First Aid Kit. A container including a quantity of first aid supplies.

Roller Bandage. A bandage made of gauze or gauze-like materials; generally wrapped around a body part over a dressing.

Swab. A single-use crushable, hermetically sealed ampoule with an applicator tip used to clean and/or apply a solution.

Towelette. A single-use, sealed, impregnated material used to clean and/or apply a solution.

Unit First Aid. A system of packaging first aid materials in uniform sized packages containing one or more applications of first aid products.

Wipe. A small towelette.

Table 1. Classification and Characteristics of First Aid Kits

Type	Use	Portable	Mountable	Water Resistant	Waterproof	Performance	Kit Examples
I	Indoor		X				Cabinets
II	Indoor	X					Soft Packs
III	Indoor/ Outdoor	X	X	X			Plastic Kits
IV	Indoor/ Outdoor	X	X		X	Section 5	Metal Kits

4. Classification of First Aid Kits

4.1 General

All first aid kits meeting the requirements of this standard shall incorporate a means to contain and protect kit supplies while permitting easy accessibility. First aid kits shall be classified as Type I, Type II Type III or Type IV as described in Sections 4.2 thorugh 4.5 and summarized in Table 1.

4.2 Type I

Type I first aid kits are intended for use in stationary, indoor settings where the potential for damage of kit supplies due to environmental factors and rough handling is minimal. Type I first aid kits shall have a means for mounting in a fixed position and are generally not intended to be portable.

NOTE: Typical applications for Type I first aid kits may include, but are not limited to, the following: general indoor use, an office setting or a manufacturing facility. First aid cabinets would generally fall into the Type I classification.

4.3 Type II

Type II first aid kits are intended for use in portable, indoor settings where the potential for damage of kit supplies due to environmental factors and rough handling is minimal.

NOTE: Typical applications for Type II first aid kits may include, but are not limited to, the following: general indoor use, an office setting or a manufacturing facility.

4.4 Type III

Type III first aid kits are intended for portable use in mobile, indoor and/or outdoor settings where the potential for damage of kit supplies due to environmental factors is not probable. Type III kits shall have a means to be mounted in a fixed position and shall have a water resistant seal.

Note: Typical applications for Type III first aid kits may include general indoor use and sheltered outdoor use.

4.5 Type IV

Type IV first aid kits are intended for portable use in the mobile industries and/or outdoor settings where the potential for damage to kit supplies due to environmental factors and rough handling is significant. Type IV kits shall have a means to be mounted in a fixed position.

NOTE: Typical applications for Type IV first aid kits may include, but are not limited to, the following: the transportation industry, the utility industry, the construction industry, and the armed forces.

5. Performance Requirements for Type IV Kits

5.1 Corrosion and Moisture Resistance

After being subjected to the corrosion test as specified in Section 5.1.1, the kits shall not be difficult to open or show evidence of moisture on the inside.

5.1.1 Corrosion and Moisture Resistance Test

Three kits shall be tested for corrosion and moisture resistance in accordance with ASTM B117 *Standard Practice for Operating Salt Spray (fog) Apparatus* for a duration of 480 hours (20 days). The exterior surface of each sample shall

be carefully blotted dry and the container shall be opened. Each sample shall be evaluated for ease of operation. The interior of the kit container shall be examined for evidence of moisture. Difficult operation or any evidence of moisture is sufficient cause for failure.

5.2 Impact Resistance

After being conditioned and subjected to the drop test as specified in Section 5.2.1, the kits shall not open or be rendered difficult to open. If any of the three test samples cannot be opened easily after impact or opens as a result of impact, the kit fails the test.

5.2.1 Drop Test

The purpose of the drop test is to ensure that the first aid supplies remain in the container.

Test sample shall consist of a first aid container loaded with the appropriate weight as noted below:

- 1 lb for 10 unit container
- 1.5 lb for 16 unit container
- 2 lb for 24 unit container
- 2.5 lb for 36 unit container.

Three samples shall be conditioned hot at 120°F (49°C) for a minimum of 2 hours, and three samples shall be conditioned cold at 0°F (-18°C) for a minimum of 2 hours.

Each conditioned sample shall be subjected to the following drop test within 1.0 minute of removal from the conditioning environment. Each sample shall be dropped freely from a vertical height of 48 in. (120 cm), as measured from the bottom of the kit sample, onto a hard flat rigid surface such as concrete or a surface of equivalent hardness. Each sample shall be dropped once, each on a different corner of the case. For first aid kits that do not have corners, each sample shall be dropped on a different location. The kits shall be examined after impact to determine if the kit is opened or is capable of being opened.

6. First Aid Kits Supplies

First aid kits should be regularly inspected to ensure completeness, condition of supplies and expiration dates to maintain compliance with this standard. Supplies shall be natural rubber latex free. Any supply beyond its marked expiration date should be removed from the kit and replaced. Additional quantities should to be added as needed to address the hazards of a particular work environment.

6,1 Required Supplies

All Type 1, Type II, Type III and Type IV first aid kits conforming to the requirements of this standard shall contain the first aid supplies indicated in Table 2. The quantity, dimensions, or volume listed for each supply is the minimum for compliance with this standard. Larger-sized supplies that meet or exceed the performance requirements of Section 6.1.1 are considered equivalent.

6.1.1 Minimum Performance Criteria for Required Supplies

6.1.1.1 Absorbent Compress. Each absorbent compress shall be at least 32 sq. in. (206 sq. cm) with no side smaller than 4 in. (10.1 cm) with at least an equivalent absorbency of 2.37 fl. oz. (70 g) of water as defined by the gauze section in ASTM D1117 *Standard Guide for Evaluating Nonwoven Fabrics.* Each compress shall be individually packaged, sealed, and sterile.

NOTE: This is a major wound compress to be used to apply pressure and stop bleeding. A compress folded to a minimum 4 x 8 in. (10.1 x 20.3 cm) size is acceptable if it meets the absorbency requirement.

Table 2. Required Supplies

Supply and Minimum Size or Volume	Performance Requirement Section	Minimum Quantity
Absorbent Compress, 32 sq. in. (206 sq. cm), with no side smaller than 4 in. (10 cm)	6.1.1.1	1
Adhesive Bandages, 1 x 3 in. (2.5 x 7.5 cm)	6.1.1.2	16
Adhesive Tape, 3/8 in. x 2.5 yd. (2.3 m total	6.1.1.3	1
Antibiotic Treatment, 0.14 fl oz (0.5 g) application	6.1.1.4	6
Antiseptic, 0.14 fl. oz. (0.5 g) application	6.1.1.5	10
Burn Treatment, 1/32 oz. (0.9 g) application	6.1.1.6	6
First Aid Guide	6.1.1.7	1
Medical Exam Gloves	6.1.1.8	2 pair
Sterile pad, 3 x 3 in. (7.5 x 7.5 cm)	6.1.1.9	4
Triangular Bandage, 40 x 40 x 56 in. (101 x 101 x 142 cm)	6.1.1.10	1

6.1.1.2 Adhesive Bandage. Each adhesive bandage shall consist of a non-adherent absorbent pad attached to the central area of a strip of adhesive material. The adhesive strip shall be 3.0 in. ± 1/16 in. (76 mm ± 1.6 mm) by 1.0 in. ± 1/32 in. (25.4 mm ± 0.8 cm). The absorbent pad shall have an area between 0.65 and 1.0 sq. in. (420 - 645 sq. mm). The ratio of the greater pad dimension to the lesser pad dimension shall be between 1.0 and 2.0. The adhesive material shall have a moisture vapor transmission rate of at least 500 gm/m^2 per 24 hours over its entire area in accordance with ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials*. Protective material shall cover the adhesive material and pad in such a manner as to prevent contamination of the pad. The protective facing material shall not impair the adhesiveness of the adhesive material and shall be easily removed. Each bandage shall be individually packaged, sealed and sterile.

6.1.1.3 Adhesive Tape. Adhesive tape shall be at least 3/8 in. (9.5 mm) wide and a minimum of 2.5 yd (2.3 m) long and meet the applicable requirements for adhesive tape as defined in the current edition of the USP/NF.

NOTE: Multiple rolls may be used to meet the minimum requirement of 2.5 yd (2.3 m) of tape.

6.1.1.4 Antibiotic Treatment. Each antibiotic treatment shall meet the applicable requirements for antibiotic treatment as defined in the current edition of the USP/NF. Each treatment shall be packaged in individual use applications containing at least .14 fl oz. (0.5 g) of ointment. Each individual-use application shall not be reusable.

6.1.1.5 Antiseptic. Each antiseptic shall meet the requirements of all applicable FDA requirements shall be contained in an individual-use application containing at least 0.14 fl. oz. (0.5 g) of antiseptic. Each individual-use application shall not be reusable.

NOTE: Commonly used applicators are swabs, wipes and towelettes. Spray containers with a minimum of ten 0.14 fl. oz. (0.5 g) applications are acceptable to meet this requirement.

6.1.1.6 Burn Treatment. Each burn treatment shall be a water soluble compound packaged in individual-use applications containing at least 1/32 oz. (0.9 g).

NOTE: Spray containers with a minimum of six 1/32 oz. (0.9 g) applications are acceptable to meet this requirement. Burn treatment, as required here, is intended to address the treatment of minor burns.

Table 3. Dimensions of Bandage Compress (± 1/8 in. ; ± 0.32 cm)

Pad Size		Continuous Bandage		Opening Size of Pad	
in.	(cm)	in.	(cm)	in.	(cm)
2 x 2	5 x 5	2 x 36	5 x 90	2 x 4	5 x 10
3 x 3	7.5 x 7.5	3 x 60	7.5 x 152	3 x 6	7.5 x 15
4 x 4	10 x 10	4 x 72	10 x 180	4 x 8	10 x 20

6.1.1.7 First Aid Guide. Guidance for immediate care given to a victim of injury or sudden illness until more advance care, if needed, shall be included in the kits. At a minimum, the guide shall include the areas outlined in Appendix A.

6.1.1.8 Medical Exam Gloves. Gloves shall meet the requirements of FDA regulation 21 CFR 800.20 for medical grade gloves.

6.1.1.9 Sterile pad. Each sterile pad shall be at least 3 x 3 in. (7.5 x 7.5 cm) in size and absorb at least 0.56 fl. oz. (2 g) of water as determined by ASTM D1117 *Standard Guide for Evaluating Nonwoven Fabrics*. Each sterile pad shall be individually packaged, sealed and sterile.

6.1.1.10 Triangular Bandage. Each bandage shall be made from muslin at least 60/48 weave or a material of equivalent mechanical strength. When unfolded, the outer dimensions of the bandage shall be at least 40 x 40 x 56 in. (101 x 101 x 142 cm).

6.2 Recommended Supplies

In addition to the required supplies listed in Section 6.1.1, optional supplies and sizes should be included, to augment a kit based upon the specific hazards existing in a particular work environment. Supplies specifically addressed by this standard shall meet all of the applicable criteria in Section 6.2.1. Items not addressed by this standard shall be in compliance with standards or regulations, where applicable, established by the U.S. Food and Drug Administration (FDA), the current edition of the U.S. Pharmacopoeia/National Formulary (USP/NF) or any other equivalent standard writing body.

6.2.1 Minimum Performance Criteria for Recommended Supplies

6.2.1.1 Analgesic (Oral). Oral analgesics included in a first aid kit shall be packaged in a single dose, tamper evident, package with full labeling as required by FDA regulations, and should contain no ingredients which are known to cause drowsiness.

6.2.1.2 Bandage Compress. Each bandage compress shall consist of an absorbent, non-adherent pad substantially free from loose ends and raveling and constructed from a material having at least the equivalent absorbency of 16 thicknesses of Type III (28/24) absorbent gauze as defined by the current edition of the USP/NF. The compress shall be securely attached to a continuous bandage substantially free from loose ends and raveling, constructed from material having the equivalent strength of Type I (44/36) gauze. The bandage shall be pleated or rolled to provide easy opening and application. Each bandage compress shall be individually packaged, sealed and sterile. Bandage compresses shall conform to one of the sizes shown in Table 3.

6.2.1.3 Breathing Barrier. The breathing barrier shall be a single use disposable medical device for CPR use, listed with the FDA and have a current valid 510 (k). The device shall provide protection from direct contact with bodily fluids by means of its construction and the use of a one-way valve, filter medium or other equivalent method. Each barrier shall be packaged in an easily opened container, clearly labeled with the name of the device, together with comprehensive instructions for use.

NOTE: When evaluating the workplace to determine the need for other items, consideration should be given to state or local governing authority related to breathing barriers and training on these devices.

Table 4. Minimum Quantity Requirements for Unit Packaging

Unit first aid supply	Minimum Size or Volume - US	Minimum Size or Volume (metric)	Supply quantity per unit package
Absorbent Compress	32 sq. in.	206 sq. cm	1
Adhesive Bandage	1 x 3 in.	2.5 x 7.5 cm	16
Adhesive Tape	2.5 yd (total)	2.3 m	1 or 2
Antibiotic Treatment	0.14 fl oz.	0.5 g	6
Antiseptic Swab	0.14 fl oz.	0.5 g	10
Antiseptic Wipe	1 x 1 in.	2.5 x 2.5 cm	10
Antiseptic Towelette	24 sq. in.	157 sq. cm	10
Bandage Compress (2 in.)	2 x 36 in.	5 x 91 cm	4
Bandage Compress (3 in.)	3 x 60 in.	7.5 x 152 cm	2
Bandage Compress (4 in.)	4 x 72 in.	10 x 183 cm	1
Breathing Barrier			1
Burn Dressing	4 x 4 in.	10 x 10 cm	1
Burn Treatment	1/32 oz.	0.9 g	6
Cold Pack	4 x 5 in.	10 x 12.5 cm	1
Eye Covering, with means of attachment	2.9 sq. in.	19 sq. cm	2
Eye/Skin Wash	4 fl. oz. total	118 ml total	1
Eye/Skin Wash & Covering, with means of attachment	4 fl. oz. total 2.9 sq. in.	118 ml total 19 sq. cm	1 2
Gloves			2 pair
Hand Sanitizer	1/32 oz.	0.9 g	6
Roller Bandage (4 in.)	4 in. x 4 yd.	10 x 366 cm	1
Roller Bandage (2 in.)	2 in. x 4 yd.	5 x 366 cm	2
Sterile pad	3 x 3 in.	7.5 x 7.5 cm	4
Triangular Bandage	40 x 40 x 56 in.	101x 101 x 142 cm	1

6.2.1.4 Burn Dressing. Burn dressings shall be a gel-soaked pad made of a material that avoids fibers from becoming imbedded in the burn wound. Gel material shall be water soluable. Each dressing size shall be at least 12 sq. in. (77.4 sq. cm) and shall be single use.

6.2.1.5 Cold Pack. Each cold pack shall be at least 4 x 5 in. (10 x 12.5 cm) in size and shall reach a temperature between 20 - 40°F (-6 - 4°C) within 10 seconds of activation. The cold pack shall maintain a temperature between 20 - 40°F (-6 - 4°C) for a period of at least 10 minutes. Cold packs shall activate under normal hand pressure and shall not leak under normal conditions of use.

6.2.1.6 Eye Covering. Eye covering(s) shall have the ability to cover both eyes, an area of at least 2.9 sq. in. (19 sq. cm) per eye, and conform to each eye cavity. The covering shall have a thickness of at least 1/4 in. (0.64 cm) when not compressed. Each eye covering shall have at least the absorbency of absorbent gauze as defined by the current edition of the USP/NF. The eye covering shall be free of loose threads and raveled edges. Each eye covering shall be individually packaged, sealed, and sterile.

NOTE: The minimum requirement for eye covering shall be two eye pads or a single covering for both eyes.

6.2.1.7 Eye/Skin Wash. A minimum of 4 fl. oz. (118 ml) of a sterile, isotonic, buffered solution as specified by the FDA in 21 CFR 349 shall be contained in at least 0.5 fl. oz. (15 ml) individual-use applications.

NOTE: Where the work environment dictates the possible need for copious amounts of fluid, users should refer to ANSI/ISEA Z358.1 *American National Standard for Emergency Eyewash and Shower Equipment.*

6.2.1.8 Hand Sanitizer. Hand Sanitizers shall be water soluable with a minimum 61% ethyl alcohol as the active ingredient.

NOTE Spray containers with a minimum of six 1/32 oz. (0.9 g) applications are acceptable to meet this requirement.

6.2.1.9 Roller Bandage. Each roller bandage shall be at least 2 in. (5 cm) wide and at least 4 yd (365 cm) long (non-stretched). Each bandage shall be constructed from a material at least the equivalent strength of Type I USP 28-NF23 (44/36) gauze as defined by the current edition of USP/NF. Each bandage shall be individually packaged and sealed.

NOTE: A conforming bandage that can stretch to at least 4 yards (365 cm) may be used in place of roller bandage.

7. Unit First Aid Kit

7.1 General

Unit first aid kits shall be designated as by Type in accordance with Section 4. Unit first aid kits shall meet the all the applicable requirements of Section 6.

7.2 Packaging for Individual Basic Units

Where a minimum individual first aid supply is packaged for a unit first aid kit, it shall meet the specifications in Table 4 and the applicable performance criteria in Sections 6.1.1 and 6.2.1.

7.3 Unit Packaging Labeling

All unit packages shall be labeled with at least the following information:

(1) The name of the item shall appear at least on the top panel and one end panel,
(2) The quantity contained,
(3) Instructions and/or illustrations for proper use of supplies,
(4) Name of manufacturer, packager, and/or distributor, and place of business,
(5) All unit packages shall be labeled in accordance with the requirements of the Food, Drug & Cosmetic Act, and all other applicable state and federal regulations.

Unit packages shall include the following color coding:

- Blue - Antiseptics
- Yellow - Bandages
- Red - Burn Treatment
- Orange - Personal Protective Equipment (PPE)
- Green – Miscellaneous

NOTE: Size and manner of color coding is discretionary but should be identifiable.

8. First Aid Kit Marking and Labeling

Each kit and/or location shall be visibly marked as a place where first aid supplies are located.

Each complete first aid kit shall contain the information shown in Figure 1, written in at least 6 point font.

Figure 1. ANSI/ISEA Z308.1-2009 Label

ANSI/ISEA Z308.1-2009 Type I, II, III or IV

Caution! This kit meets ANSI/ISEA Z308.1-2009 only when required minimum fill is maintained with first aid products marked "ANSI/ISEA Z308.1-2009."

Required Minimum Fill	Recommended Supplies
1 First Aid Guide	Analgesic (Oral)
1 Absorbent Compress 4 x 8 in. min.	Bandage Compress 2 x 36 in. min.
16 Adhesive Bandages 1 x 3 in.	Breathing Barrier, single use
1 Adhesive Tape 2.5 yd.	Burn Dressing 12 sq. in. min.
10 Antiseptic Treatment Applications 0.5 gm. each	Cold Pack 4 x 5 in. min.
6 Burn Treatment Applications 0.9 gm. each	Eye Covering 1/4 in. thick min.
4 Sterile Pads 3 x 3 in. min.	Eye/Face Wash, sterile 4 fl. oz. min
2 Pair Medical Exam Gloves	Roller Bandage 2 in. x 4 yd. min.
1 Triangular Bandage 40 x 40 x 56 in. min.	Hand Sanitizer, 0.9 gm. min
6 Antibiotic Treatment Applications 0.5 gm. each	

The described kit may be suitable for some businesses. However, the adequacy of the contents for hazards of each work environment should always be evaluated by competent personnel. For a variety of operations, employers may find that additional first aid supplies and kits are needed.

Appendix A: First Aid Guide

The inclusion of a first aid guide in a first aid kit is required per Section 6.1 of this standard. At a minimum, the information below shall be included in the guide. The manner in which such information is conveyed is left to the discretion of the manufacturer.

First Aid Guide Areas
Emergency steps of assessing the scene and person, calling 9-1-1 or location emergency number
Establishing responsiveness
Establishing and maintaining an open and clear airway
Performing rescue breathing
Treating airway obstruction in a conscious victim
Performing CPR
Using an AED
Recognizing the signs and symptoms of shock and providing first aid for shock from illness or injury
Assessing and treating a victim who has an unexplained change in level of consciousness or sudden illness
Controlling bleeding with direct pressure
Poisoning
Responding to medical emergencies Chest pain Stroke Breathing problems Anaphylactic reaction Hypoglycemia in diabetics taking insulin Seizures Reduced level of consciousness Impaled object
Wounds Assessment of and first aid wounds including abrasions, cuts, lacerations, punctures, avulsions, amputations and crash injuries Principles of wound care including infections precautions Principles of body substance isolation, universal precautions and use of PPE
Burns Assessment of the severity of a burn Recognizing whether a burn is thermal, electrical or chemical and the appropriate first aid
Temperature extremes Exposure to cold, including frostbite and hypothermia Exposure to heat, including heat cramps, heat exhaustion and heat stroke
Musculoskeletal injuries Fractures Sprains, strains, contusions and cramps Head, neck, back and spinal injuries
Eye injuries
Mouth and teeth injuries Oral injuries, lip and tongue injuries, broken and missing teeth
Bites and stings Human and animal bites Bites and stings from insects; instruction in first aid treatment for anaphylacsis