



ANSI/AIHA Z88.7-2010

Color Coding

of Air-Purifying Respirator Canisters, Cartridges, and Filters

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American Industrial Hygiene Association*



BY THE ANSI/AIHA Z88.7 Subcommittee



ANSI/AIHA Z88.7–2010

**American National Standard —
Color Coding of Air-Purifying
Respirator Canisters,
Cartridges, and Filters**

Secretariat

American Industrial Hygiene Association

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American National Standards Institute, Inc.

American National Standard

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FOREWORD (This foreword is not part of the American National Standard/AIHA Z88.7–2010)

Manufacturers, users and governmental regulatory agencies will find this standard to be a valuable tool for accurate and rapid identification of selected industrial respiratory protective devices by examination of their respective canisters, cartridges or filters. Readily recognizable colors are specified for canister, cartridge or filter container or labels. Color specification utilizing the Munsell system will result in uniform cartridge, canister, filter container and label colors among respirator manufacturers. American National Standards Committee Z88.7 on Color-Coding of Air-Purifying Respirator canisters, cartridges and filters, under whose jurisdiction this standard was developed, has the following scope:

The requirements of this standard apply to the identification of air-purifying respirator canisters, cartridges and filters used to provide respiratory protection against gases, vapors and/or particles. These requirements apply to cartridges and canisters used in industrial or healthcare facilities, office buildings, mines, ships, confined spaces, wildland fire-fighting or other similar locations. These requirements do not apply to canisters, cartridges or filters used on:

- a) aviation respirators
- b) military respirators

This standard was originally published as American National Standard K13.1-1973. Changes were made in the 2001 revision of this standard to reflect currently available color specifications and to eliminate reference to labeling requirements.

This latest revision incorporates some of the colors used internationally in an attempt to harmonize with current and future European and International standards. It also specifies color for Chemical, Biological, Radiological and Nuclear (CBRN) canisters, not yet developed at the time of the last revision.

New technology and research continues to change this field and it is hoped that future versions of the standard will reflect this growth in knowledge. Suggestions for improvement are welcome. They should be sent to:

Program Manager, Standards
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2700 Prosperity Ave., Suite 250
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ANSI/AIHA Z88.7-2010

This standard was processed and approved for submittal to ANSI by the Accredited Standards Committee Z88 on Respiratory Protection. Consensus was reached through a process involving the entire Z88 Committee in a series of reviews and in the final vote of approval. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the Z88 Committee had the following members:

James S. Johnson, PhD, CIH, QEP, Chair
Stephen C. Graham, CIH, CSP, Vice Chair
Mili Mavely, Secretariat Representative

Organization Represented

Name of Representative

3M	C. Colton
American Industrial Hygiene Association	M. Schmoltdt
American Iron and Steel Institute	P. Hernandez
American Society of Safety Engineers	R. Harley
American Welding Society	S. Hedrick
Bullard	J. King
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ChemRisk, Inc.	J. Sahmel
Consolidated Edison of New York	G. Slintak
International Association of Firefighters	R. Duffy
International Safety Equipment Association	J. Birkner
Health Physics Society	S. Perle
National Fire Protection Association	B. Teele
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Safety Equipment America	G. Berndtsson
Scott Health and Safety	M. Lorkowski
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Wayne State University	S. Mingela

Individual Members

C. Bien
D. Bevis
T. Nelson
R. Metzler
B. Reinert

Subcommittee Z88.7 for the Color Coding of Air-Purifying Respirator Canisters, Cartridges and Filters, which developed this standard, had the following members:

Bill Newcomb, Subcommittee Chair
Lynn Feiner
Jennifer Sahmel

American National Standard — Color Coding of Air Purifying Respirator Canisters, Cartridges and Filters

1. Purpose

The purpose of this standard is to establish a system of marking air-purifying respirator canisters, cartridges and filter containers by means of colors in order to:

1. Facilitate rapid identification of the canisters, cartridges, and filters by users.
2. Ensure color consistency among respirator manufacturers.

2. Scope

The requirements of this standard apply to the identification of air-purifying respirator canisters, cartridges and filters used to provide respiratory protection against gases, vapors or particles. These requirements apply to canisters, cartridges, and any high efficiency filters, whether encapsulated or un-encapsulated, used as components of air-purifying respirators. These requirements do not apply to and shall not be used to identify canisters, cartridges or filters for:

- a) aviation respirators,
- b) military respirators,
- c) non-high efficiency filters, or
- d) un-encapsulated respirator filters (e.g. filtering facepieces) except for high efficiency filters.

Users of this standard should be aware that regulatory agencies might have requirements that are different from this standard.

3. Application

The manufacturers of air-purifying respirator canisters, cartridges or filters which fall within the scope of this standard shall verify that all of these canisters,

cartridges or filters are properly color-coded according to these requirements before they are delivered into the stream of commerce.

4. Definitions

4.1 Air-purifying element: a filter, sorbent, catalyst or combination thereof, which removes specific contaminants from the air passing through it.

4.2 Air-purifying respirator: A respirator in which ambient air is passed through an air-purifying element(s) that remove(s) the contaminant(s). Air is passed through the air-purifying element(s) by means of the breathing action or by a blower.

4.3 canister/cartridge: A container encapsulating an air-purifying element.

4.4 CMYK: A subtractive color model, often referred to as process color or four color process, used in color printing. **CMYK** refers to the four inks used in most color printing: **C**yan, **M**agenta, **Y**ellow, and **K**ey (black).

4.5 High efficiency filter: A filter with greater than 99.97% efficiency, and suitable for any aerosol.

4.6 Filter: An air-purifying element which removes both solid and liquid aerosols.

4.7 Munsell Notation: A means for specifying the colors of objects.⁽¹⁾

5. Colors

5.1 Each respirator canister, cartridge, filter container or canister or cartridge label shall be a distinctive color as indicated in Table 1.