

NOT MEASUREMENT
SENSITIVE

MIL-STD-709D
w/CHANGE 1
03 May 2011

SUPERSEDING
MIL-STD-709D
16 March 2009

DEPARTMENT OF DEFENSE DESIGN CRITERIA STANDARD AMMUNITION COLOR CODING



Comments, suggestions, or questions on this document should be addressed to: Commander, U.S. Army ARDEC, ATTN: RDAR-QES-E, Picatinny Arsenal, New Jersey 07806-5000 or ardecstdzn@conus.army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST online database at <https://assist.daps.dla.mil>.

AMSC N/A

FSC: 1395

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-STD-709D
w/CHANGE 1

FOREWORD

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. This standard covers the procedure for establishing ammunition color coding.
3. The changes in this document update the definitions for practice (LIGHT BLUE) and dummy (BRONZE) ammunition and also included a LIGHT ORANGE color for exploding and/or bursting grenades without HE. A future and more comprehensive update to this standard is in progress, which will address discrepancies between NATO, USAF, and USN color standards and update the color definitions for all ammunition.

MIL-STD-709D
w/CHANGE 1

CONTENTS

<u>PARAGRAPH</u>	<u>PAGE</u>
<u>FOREWORD</u>	ii
1. <u>SCOPE</u>	1
1.1 <u>Scope</u>	1
1.2 <u>Classification</u>	1
2. <u>REFERENCED DOCUMENTS</u>	1
2.1 <u>General</u>	1
2.2 <u>Government Documents</u>	2
2.3 <u>Order of Precedence</u>	2
3. <u>DEFINITIONS</u>	3
4. <u>GENERAL REQUIREMENTS</u>	3
4.1 <u>Colors</u>	3
4.2 <u>Application of color coding</u>	21
4.3 <u>Special Coding</u>	21
4.4 <u>Materials</u>	24
4.5 <u>Data Marking</u>	24
4.6 <u>Packaging and Packing</u>	24
5. <u>DETAIL REQUIREMENTS</u>	24
6. <u>NOTES</u>	24
6.1 <u>Intended Use</u>	24
6.2 <u>Acquisition requirements</u>	24
6.3 <u>International standardization agreement implantation</u>	24
6.4 <u>Tracer</u>	24
6.5 <u>Color Effect</u>	24
6.6 <u>Definitions</u>	25
6.7 <u>Subject term (key word) listing</u>	25
6.8 <u>Revision/amendment history</u>	25
6.9 <u>Changes from previous issue</u>	26
 <u>TABLE</u>	 <u>PAGE</u>
I <u>Ammunition Color Code and Application for Tier I</u>	4
II <u>Ammunition Color Code for Tier II</u>	19
III <u>Application of Color Coding for Tier II</u>	22

MIL-STD-709D
w/CHANGE 1

1. SCOPE

1.1 Scope. This standard covers a color coding system for ammunition.

1.2 Classification. The following ammunition tiers use the color coding system:

- a. Tier I – Used for ammunition of a caliber .50 and below with the exception of ammunition under 1.2.1.
- b. Tier II – Used for ammunition of a caliber 20mm and above with the exception of ammunition under 1.2.2.

1.2.1 Exceptions to Tier I. This standard does not apply to the following ammunition:

- a. Blank Ammunition
- b. Proof or high pressure test ammunition
- c. Revolver ammunition
- d. Shotgun ammunition
- e. .22 caliber
- f. .30 caliber (carbine and rifle)

1.2.2 Exceptions to Tier II. This standard does not apply to the following ammunition:

- a. Blank Ammunition
- b. Cartridge cases
- c. Propelling charges for fixed, semi-fixed, separated and separate loading ammunition
- d. Commercial ammunition and explosives
- e. Sectionalized or display models
- f. Ammunition devices required to be inconspicuous when exposed to close range observation
- g. Ammunition components and demolition accessories which normally do not require color coding for identification purposes
- h. Fuzes
- i. Cartridge or propellant-actuated devices, initiators, igniters, detonators and other components of aircrew escape systems or aircraft external stores ejection systems
- j. Proof or high pressure test ammunition
- k. Inert ammunition used in drill type training or for clearing automatic weapons and for which no protective coating is required or which has a cadmium plate/chromate treatment for the protective coating
- l. War reserve and training nuclear weapons and their containers. Required marking for these items are contained in the appropriate Joint Atomic Weapons Publications
- m. Ammunition in containers adequately identified as to contents and which ammunition is not visible to the user during handling or firing operations

2. REFERENCED DOCUMENTS.

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this standard. This section does not include documents cited in other sections of this standard or recommended for additional information or as examples. While very effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all

MIL-STD-709D
w/CHANGE 1

specified requirements of documents cited in sections 3, 4, or 5 of this standard, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL STANDARDS

FED-STD-595/11136	-	Red, Gloss
FED-STD-595/12246	-	Orange, Gloss
FED-STD-595/14187	-	Green, Gloss
FED-STD-595/17043	-	Misc (Black, White, Gold, Silver, Violet), Gloss
FED-STD-595/17100	-	Misc (Black, White, Gold, Silver, Violet), Gloss
FED-STD-595/17178	-	Misc (Black, White, Gold, Silver, Violet), Gloss
FED-STD-595/26493	-	Gray, Semi-gloss
FED-STD-595/30117	-	Brown, Flat
FED-STD-595/30140	-	Brown, Flat
FED-STD-595/31136	-	Red, Flat
FED-STD-595/31158	-	Red, Flat
FED-STD-595/31302	-	Red, Flat
FED-STD-595/32246	-	Orange, Flat
FED-STD-595/33538	-	Yellow, Flat
FED-STD-595/34088	-	Green, Flat
FED-STD-595/34108	-	Green, Flat
FED-STD-595/34138	-	Green, Flat
FED-STD-595/34449	-	Green, Flat
FED-STD-595/34558	-	Green, Flat
FED-STD-595/35109	-	Blue, Flat
FED-STD-595/35240	-	Blue, Flat
FED-STD-595/36231	-	Gray, Flat
FED-STD-595/37038	-	Misc (Black, White, Gold, Silver, Violet), Flat
FED-STD-595/37142	-	Misc (Black, White, Gold, Silver, Violet), Flat
FED-STD-595/37875	-	Misc (Black, White, Gold, Silver, Violet), Flat

(Copies of these documents are available online at <https://assist.daps.dla.mil/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

MIL-STD-709D
w/CHANGE 1

3. DEFINITIONS.

3.1 Binary agent. Lethal agent produced by the reaction of non-lethal chemical constituents when mixed within ammunition.

3.2 Binary munitions. Ammunition which contains two or more chemicals that remain separated until use. The ammunition is not lethal or explosive until mixed on demand or by shock (set back or impact).

3.3 Improved Conventional Munition (ICM). Ammunition which embodies a unique design to control the number, size, and distribution of fragments produced when functioned.

3.4 Incapacitating agent. An agent that produces temporary physiological or mental effects, or both, which will render individuals incapable of concerted effort in the performance of their assigned duties.

3.5 Riot control agent. A chemical that produces temporary irritation or disabling effects when in contact with the eyes, skin, or when inhaled.

3.6 Dummy ammunition. Inert ammunition used for maintenance operations and training purposes.

3.7 Inert Ammunition. Ammunition void of all energetics such as propellant fill and primer.

3.8 Training Ammunition. Ammunition types (Ball, Tracer, Short Range, Blank Dim Tracer, Overhead Fire, Inert and Dummy) used to support training strategies.

4. GENERAL REQUIREMENTS.



4.1 Colors.

4.1.1 Ammunition color. Colors of the ammunition color code and their interpretation shall be as shown in Table I and Table II. Colors used for camouflage or other purposes shall be distinctively different from those of the code, unless otherwise provided herein.



4.1.2 Color description. The colors specified herein shall match those of the corresponding numbers in FED-STD-595, as shown in Table I and Table II, except that the first digit of the number may be changed in accordance with the ammunition requirements for a gloss, semi-gloss or a lusterless finish.

4.1.3 Olive Drab Green. Except as listed in Table III, the color Olive Drab Green, hereafter called Olive Drab, FED-STD-595/34088, shall have no color coding significance within the scope of this standard.



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	5.56mm	Silver	FED-STD-595/17178	Identifies completely inert small caliber ammunition designed for use in activities such as assembly, testing, handling, training, etc.	Dummy	Silver	Silver	
I	5.56mm	Green	FED-STD-595/34138	Identifies ball ammunition for combat use and training	Ball	None	Green Tip	




MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	5.56mm	Red	FED-STD-595/11136	Identifies tracer ammunition for combat use and training with 'trace to target' capability	Tracer	None	Red Tip	
I	5.56mm	Orange	FED-STD-595/12246	Identifies tracer ammunition for combat use and training with 'trace to target' capability	Tracer	None	Orange Tip	




MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	5.56mm	Black	FED-STD-595/37038	Identifies an armor piercing ammunition or indicates an armor piercing capability	Armor Piercing	None	Black Tip	
I	5.56mm	Blue	FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's	Identifies short range training ammunition	Short Range Training	None	Light Blue	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	5.56mm	Silver & Blue	natural zinc/aluminum FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's	Identifies close combat mission capability kit dye marking ammunition for rifles	Dye Marking	Silver	Translucent Dome with Blue Marking Compound	
I	5.56mm	Silver & Red	natural zinc/aluminum FED-STD-595/11000's FED-STD-595/21000's FED-STD-595/31000's	Identifies close combat mission capability kit dye marking ammunition for rifles	Dye Marking	Silver	Translucent Dome with Red Marking Compound	
I	5.56mm	Silver & Yellow	natural zinc/aluminum FED-STD-595/13000's FED-STD-595/23000's FED-STD-595/33000's	Identifies close combat mission capability kit dye marking ammunition for rifles	Dye Marking	Silver	Translucent Dome with Yellow Marking Compound	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	5.56mm	Silver & Blue	natural zinc/aluminum FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's	Identifies close combat mission capability kit dye marking ammunition linked for machine guns	Dye Marking	Silver	Blue Dome with Blue Marking Compound	
I	5.56mm	Silver & Red	natural zinc/aluminum FED-STD-595/11000's FED-STD-595/21000's FED-STD-595/31000's	Identifies close combat mission capability kit dye marking ammunition linked for machine guns	Dye Marking	Silver	Blue Dome with Red Marking Compound	
I	5.56mm	Silver & Yellow	natural zinc/aluminum FED-STD-595/13000's FED-STD-595/23000's FED-STD-595/33000's	Identifies close combat mission capability kit dye marking ammunition linked for machine guns	Dye Marking	Silver	Blue Dome with Yellow Marking Compound	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	7.62mm	Silver	FED-STD-595/17178	Identifies completely inert small caliber ammunition designed for use in activities such as assembly, testing, handling, training, etc.	Dummy	Silver	Silver	
I	7.62mm	Orange	FED-STD-595/12246	Identifies tracer ammunition for combat use and training with 'trace to target' capability	Tracer	None	Orange Tip	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	7.62mm	Black	FED-STD-595/37038	Identifies an armor piercing ammunition or indicates an armor piercing capability	Armor Piercing	None	Black Tip	
I	7.62mm	Blue	FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's	Identifies short range training ammunition	Short Range Training	None	Light Blue	




MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	7.62mm	Blue & Red	FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's FED-STD-595/11000's FED-STD-595/21000's FED-STD-595/31000's	Identifies short range training tracer ammunition	Short Range Tracer Training	None	Light Blue projectile & Red Tip	
I	7.62mm	Red	FED-STD-595/11136	Identifies overhead fire tracer ammunition for training	Tracer Overhead	None	Red Tip	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	7.62mm	Purple	FED-STD-595/37142	Identifies dim tracer ammunition for combat use and training with 'trace to target' capability when night vision is used	Dim Tracer	None	Purple Tip	
I	9mm	Silver	FED-STD-595/17178	Identifies completely inert small caliber ammunition designed for use in activities such as assembly, testing, handling, training, etc.	Dummy	Silver	Silver	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	9mm	Blue & Red	FED-STD-595/35240 FED-STD-595/31302	Identifies practice tracer ammunition used for training of shoulder fired rocket launcher	Practice Tracer	None	Blue projectile & Red Tip	
I	9mm	Silver & Blue	natural zinc/aluminum FED-STD-595/15000's FED-STD-595/25000's FED-STD-595/35000's	Identifies close combat mission capability kit dye marking ammunition	Dye Marking	Silver	Translucent Dome with Blue Marking Compound	
I	9mm	Silver & Red	natural zinc/aluminum FED-STD-595/11000's FED-STD-595/21000's FED-STD-595/31000's	Identifies close combat mission capability kit dye marking ammunition	Dye Marking	Silver	Translucent Dome with Red Marking Compound	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	9mm	Silver & Yellow	natural zinc/aluminum FED-STD-595/13000's FED-STD-595/23000's FED-STD-595/33000's	Identifies close combat mission capability kit dye marking ammunition	Dye Marking	Silver	Translucent Dome with Yellow Marking Compound	
I	.50 cal	Silver	FED-STD-595/17178	Identifies completely inert small caliber ammunition designed for use in activities such as assembly, testing, handling, training, etc.	Dummy	Silver	Silver	



MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	.50 cal	Gray & Red	FED-STD-595/26493 FED-STD-595/11136	Identifies an armor piercing incendiary tracer ammunition or indicates an armor piercing incendiary tracer capability	Armor Piercing Incendiary Tracer	None	Gray & Red Tip	
I	.50 cal	Gray & Green	FED-STD-595/26493 FED-STD-595/14187	Identifies an armor piercing incendiary ammunition or indicates an armor piercing incendiary capability	Armor Piercing Incendiary	None	Gray & Green Tip	

MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued


TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	.50 cal	Gray & Purple	FED-STD-595/26493 FED-STD-595/37142	Identifies an armor piercing incendiary dim tracer ammunition or indicates an armor piercing incendiary dim tracer capability	Armor Piercing Incendiary Dim Tracer	None	Gray & Purple Tip	
I	.50 cal	Blue	FED-STD-595/35109	Identifies short range training ammunition	Short Range Tracer Training	Blue	Light Blue	

MIL-STD-709D
w/CHANGE 1TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	.50 cal	Blue & Red	FED-STD-595/35109 FED-STD-595/31158	Identifies short range training tracer ammunition	Short Range Tracer Training	Blue	Light Blue projectile & Red Tip	
I	.50 cal	Amber Sabot & Silver Penetrator	ULTEM1000 sabot plastic & natural tungsten alloy	Identifies sabot light armor penetrator ammunition	Saboted Light Armor Piercing	None	Amber Sabot & Silver Penetrator	

MIL-STD-709D
w/CHANGE 1

TABLE I. Ammunition Color Code and Application for Tier I – Continued

TIER	CALIBER	COLOR	STANDARD	INTERPRETATION	TYPE	COLOR APPLICATION		
						Body	Projectile	Picture
I	.50 cal	Red Sabot & Silver Penetrator	ULTEM1000-6015 sabot plastic & natural tungsten alloy	Identifies tracer sabot light armor penetrator ammunition	Saboted Light Armor Piercing Tracer	None	Red Sabot & Silver Penetrator	

MIL-STD-709D
w/CHANGE 1

TABLE II. Ammunition Color Code for Tier II

TIER	COLOR <u>5</u>/	STANDARD	INTERPRETATION
II	Yellow	FED-STD-595/33538	Identifies High Explosive (HE) ammunition or indicates the presence of a high explosive
II	Brown	FED-STD-595/30117 or FED-STD-595/30140	Identifies low explosive items or components or indicates the presence of a low explosive
II	Gray <u>1</u> / <u>6</u> /	FED-STD-595/36231	Identifies chemical ammunition containing a toxic chemical, incapacitating or riot control agent
II	Dark Red	FED-STD-595/31136	Identifies a riot control agent filler
II	Dark Green <u>1</u> /	FED-STD-595/34108	Identifies a toxic chemical agent filler
II	Violet	FED-STD-595/17100	Identifies an incapacitating agent filler
II	Black <u>1</u> / <u>3</u> /	FED-STD-595/37038	Identifies an armor defeating ammunition or indicates an armor defeating capability
II	Silver / Aluminum	FED-STD-595/17178	Identifies countermeasure ammunition (e.g. radar echo, leaflets)
II	Light Green <u>1</u> /	FED-STD-595/34558 or FED-STD-595/34449	Identifies screening or marking smoke ammunition
II	Light Red	FED-STD-595/31158	Identifies incendiary ammunition or indicates the presence of highly flammable material (liquids, jellies, solids), designed to produce damage by fire
II	White <u>1</u> / <u>2</u> / <u>3</u> /	FED-STD-595/37875	Identifies illuminating ammunition or ammunition designed to produce a colored light

MIL-STD-709D
w/CHANGE 1

TABLE II. Ammunition Color Code for Tier II - Continued

TIER	COLOR 4/ 5/	STANDARD	INTERPRETATION
II	Light Blue	FED-STD-595/35109	Identifies practice ammunition/munitions (see 6.6.1)
II	Orange	FED-STD-595/32246	May be used to identify ammunition used for tracking and recovery in tests or in training operations (e.g. underwater mines and torpedoes)
II	Light Orange	FED-STD-595/32544	Identifies ammunition with the potential to burst and/or explode (i.e. ammunition with no HE, ammunition that may contain low explosives, etc.)
II	Bronze, Gold, Brass	FED-STD-595/17043	Identifies inert ammunition designed for use in activities other than practice (see 6.6.2)
<p>Notes:</p> <p><u>1/</u> The following colors when applied as stated have no color coding significance: Colors GRAY, BLACK, GREEN or WHITE on underwater ammunition.</p> <p><u>2/</u> The following colors when applied as stated have no color coding significance: Colors WHITE on guided missiles, dispensers and rocket launchers.</p> <p><u>3/</u> The following colors when applied as stated have no color coding significance: Colors BLACK or WHITE when used for lettering or special marking.</p> <p><u>4/</u> The following colors when applied as stated have no color coding significance: Colors specifically applied to identify the color produced by smoke ammunition or pyrotechnics.</p> <p><u>5/</u> The following colors when applied as stated have no color coding significance: Unpainted or natural color ammunition.</p> <p><u>6/</u> The following colors when applied as stated have no color coding significance: Color GRAY on air launched missiles.</p>			

MIL-STD-709D
w/CHANGE 14.2 Application of color coding.

4.2.1 Color coding and repainting. Color coding of new production and of existing stocks, when repainting, remarking or both repainting and remarking are required for maintenance purposes, shall be in accordance with applicable ammunition drawings. These drawings, in turn, shall incorporate the color coding requirements of this standard. Repainting of current stocks merely to comply with this standard is not required.

4.2.2 Application of color. Color coding shall be applied to ammunition in the following manners, except as provided in 4.3:

- a. Preferably as the color of the normal protective coating (overall body color), or,
- b. As the color of the main identification markings, or,
- c. In the form of an appropriately colored circumferential band, approximately equal in width to one half the caliber or diameter of the ammunition except the width need not exceed two inches, or,
- d. By means of discs or squares, of the appropriate color, which shall be as large as possible consistent with the use and shape of the ammunition item.

4.2.2.1 Color combination. A combination of manners of application may be used when Table I and Table II indicates a need for more than one color, for example, a high explosive projectile having an armor defeating capability.

4.3. Special Coding.

4.3.1 Special colors and markings. Chemical ammunition containing toxic chemical, incapacitating, or riot control chemical agents shall be colored gray (FED-STD-595/36231) as the normal protective coating (overall body color). An appropriate colored band around the circumference of the ammunition shall denote the type (class) of agent (i.e., toxic chemical, incapacitating or riot control). In addition, the main identification details, including the name or chemical agent symbol shall be marked in the same color as the band denoting the agent. Where practical, in addition to the stencil, the chemical agent symbol shall be metal stamped (engraved) in 1/2-inch or larger letters in the body of the munition. Camouflage paint shall never be use for ammunition containing toxic chemical, riot control, or incapacitating agents. See Table III.

MIL-STD-709D
w/CHANGE 1TABLE III. Application of Color Coding for Tier II

TIER	AMMUNITION	COLORS		
		Body	Marking 1/	Band
II	High Explosive, (HE), except 20MM	Olive Drab	Yellow	<u>2/ 3/ 4/ 5/</u>
II	High Explosive, (HE), 20MM	Yellow	Black	None
II	Explosive Binary Munitions	Olive Drab	Yellow	Broken Yellow <u>6/</u>
II	High Explosive Plastic (HEP)	Olive Drab	Yellow	Black
II	High Explosive Anti-tank (HEAT)	Black	Yellow	None
II	Antipersonnel and anti-tank mines	Olive Drab	Yellow	<u>3/</u>
II	Incendiary	Light Red	Black	None
II	High Explosive Incendiary (HEI)	Yellow	Black	Light Red
II	Armor Piercing Incendiary (API)	Black	White	Light Red
II	Armor Piercing (AP) (a) with bursting charge (b) without bursting charge	Black Black	Yellow White	None
II	Canister	Olive Drab	White	None
II	Flechette loaded	Olive Drab	White	<u>7/ 8/</u>
II	Illuminating <u>9/</u> (a) separate loading (b) fixed or semi-fixed	Olive Drab White	White Black	White None
II	Practice (see 6.6.1) (a) with low explosive to indicate functioning (b) with high explosive to indicate functioning (c) without explosive to indicate functioning (may contain propellant)	Light Blue	White	Brown Yellow None
II	Screening or Marking Smoke Ammunition (a) Filled with other than white (b) Filled with white phosphorus	Light Green Light Green	Black Light Red	None <u>10/ 11/</u>
II	Inert ammunition designed for use in activities other than practice (see 6.6.2)	Bronze	Black	None
II	Chemical (a) Filled with a riot control agent (b) Filled with an incapacitating agent (c) Filled with a toxic chemical agent other than binary gents. (d) Filled with a toxic chemical binary nerve	Gray Gray Gray Gray	Dark Red Violet Dark Green Dark Green	1 Dark Red <u>10/</u> 1 Violet <u>10/</u> 1 Dark Green <u>10/</u> 1 Broken Dark Green <u>10/ 12/</u> <u>13/</u>

MIL-STD-709D
w/CHANGE 1

TABLE III. Application of Color Coding for Tier II - Continued

Notes:

- 1/ The letters and figures normally used for the main identification details.
- 2/ A circumferential band of yellow diamond shaped figures is applied to semi-fixed and separate loading Improved Conventional Munitions.
- 3/ A circumferential band of yellow triangular shaped figures is applied to mass scatterable mine loaded semi-fixed and separate loading ammunition.
- 4/ Separate loading ammunition for shipboard use shall have a yellow band in addition to the yellow marking.
- 5/ Bombs shall have one yellow band except thermally protected bombs shall have two yellow bands in addition to the yellow markings.
- 6/ A circumferential broken yellow band, consisting of one-half inch segments separated by one-half inch gaps, is applied to explosive binary munitions.
- 7/ A circumferential band of white diamond shaped figures is applied to ammunition containing flechettes.
- 8/ Yellow band is applied when the ammunition contains explosive designed to fracture the projectile.
- 9/ Both (a) and (b) color applications are standard. However, for land ammunition use, separate loading ammunition shall be colored olive drab as the overall body color with a white band and the main identification details marked white, and fixed and semi-fixed ammunition shall be colored white as the overall body color with the main identification details in black.
- 10/ Yellow band is applied when a high explosive burster is present.
- 11/ Separate loading ammunition for shipboard use shall have black markings and a light red band.
- 12/ Toxic chemical agent ammunition containing a Binary nerve agent filling shall be indicated by a broken dark green band having one-half inch segments separated by one-half inch spaces.
- 13/ Brown band is applied when a low explosive (e.g. expulsion charge) is present.

4.3.2 Missiles, missile components, and tactical submunition colors. Missiles, missile components and tactical submunitions, which are overpacked in color coded launchers, dispensers, warheads, projectiles, or rocket motors need not be color coded. However, when color coding is applied, the color shall comply with this standard.

4.3.3 Use of HE and mass scatterable mines. Semi-fixed and separate loading artillery ammunition containing mass scatterable mines shall be marked with a circumferential band of triangular shaped figures to indicate both an HE use and mass scatterable mine loaded ammunition. See Table III.

MIL-STD-709D
w/CHANGE 1

4.4 Materials. Color coding materials (e.g., paints, enamels, lacquers, marking inks, decals, or strippable tapes) shall be as required by the applicable ammunition drawings and specifications.

4.5 Data Marking. Data markings not otherwise specified herein, such as ammunition lot number and national stock number (NSN), will be in the same color as other markings or in black or white.

4.6 Packaging and Packing. Normally packaging and packing of ammunition do not require color coding. Color coding is required for packaging and packing of chemical ammunition, both lethal and toxic; the colors shall be in accordance with this standard.

5. DETAILED REQUIREMENTS.

5.1 Tier I color. 5.56mm, 7.62mm, and .50 caliber ammunition shall comply with the color details and applications of Table I.

5.2 Tier II color. Caliber 20mm and above ammunition shall comply with the color details and applications of Table II. Specific caliber 20mm and above ammunition shall comply with the color details and applications of Table III.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Provide color coding system for combat and training ammunition, except as noted in 1.2.1 and 1.2.2.

6.2 Acquisition requirements. Acquisition documents should specify the title, number, and date of this standard.

6.3 International standardization agreement implementation. The standard implements NATO STANAG 2953 – Identification of Ammunition – AOP-2 and NATO STANAG 2442 – Ammunition Marking for Experimental and Test Ammunition. When changes to, revision, or cancellation of this standard are proposed, the preparing activity should coordinate the action with the U.S. National Point of Contact for the international standardization agreement, as identified in the ASSIST database at <https://assist.daps.dla.mil>.

6.4 Tracer. The presence of a tracer should be indicated by a hyphenated letter T in the nomenclature, e.g., HE-T. That letter may also be placed elsewhere on the ammunition singly or as a circumferential band of T's.

6.5 Color Effect. The color or colors produced by ammunition should be indicated by symbol, when required for tactical reasons.

a. The color effect(s) should be indicated by the symbol "C" repeated at least three (3) times in the color approximating that of the effect produced. When so used, these colors should have no other coding significance.

MIL-STD-709D
w/CHANGE 1

b. Items ejecting more than one star should be marked by parallel rows of the symbol “C” one row for each star and each row in the appropriate star color.

c. Items ejecting stars where the quantity is of no significance should be marked with symbol “MULTI”.

6.6 Definitions.

6.6.1 Practice ammunition. Practice ammunitions/munitions are designed for use in place of the combat equivalent to provide training, practice, or systems testing through activities such as, but not limited to: launching, flying, firing, dropping, and prepositioning. These ammunitions/munitions may or may not contain explosives to indicate functioning.

6.6.2 Non-practice ammunition (dummy). Non-practice (dummy) ammunitions/munitions are completely inert and not designed or are intended to be used in combination with energetic material. These munitions are representative of combat or practice materiel and are used in activities such as, but not limited to: assembly, handling proficiency by personnel without firing or launching, weapons testing or handling operations, instruction, training, gauging, and maintenance.

6.7 Subject term (key word) listing.

Camouflage
Coating, protective
Finish
Gloss
Identification
Lusterless
Marking
Semi-gloss

6.8 Revisions/amendment history. The following is a record of changes incorporated into this document:

Revision	Change Description	Revision Date
-	Initial release	27 June 1960
A	Include training and dummy ammunition	30 June 1967
B	Include presence of explosive, training and dummy items	13 October 1972
C	Update color codes for new production and existing items	6 May 1976
C, Change 1	Update Tables I and II	01 February 1980
C, Change 2	Add Table of Contents, update Tables I and II, add Section 6	28 September 1984
C, Change 3	Incorporate Changes 1 and 2, add small caliber color coding	13 November 2008
D	Update USG document references, add Section 6.6 and 6.7, update Table I	16 March 2009

MIL-STD-709D
w/CHANGE 1

6.9 Changes notations. The margins of this standard are marked with vertical lines to indicate modifications generated by this change. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Custodians:
Army – AR
Navy – OS
Air Force - 02

Preparing activity:
Army - AR
(Project 1395-2011-001)

Review activities:
Army – EA, MI, MR
Navy – AS, MC, NP
Air Force – 70, 99

Civil agencies:
GSA – FAS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil>.