

TECHNICAL MANUAL

**ARMY AMMUNITION DATA SHEETS
SMALL CALIBER AMMUNITION
FSC 1305**

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Page No.	*Change No.	Page No.	*Change No.
Cover.....	0	9-1 thru 9-46.....	0
A	6	9-47 and 9-48	2
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ii.....	0	11-1 thru 11-22.....	0
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2-1 thru 2-16	0	12-9 and 12-10	6
2-17 thru 2-22	5	13-1 thru 13-8.....	0
3-1 thru 3-10	0	14-1 thru 14-42.....	0
4-1 thru 4-12	0	15-1 thru 15-12.....	0
5-1 thru 5-24	0	15-13 and 15-14	3
6-1 thru 6-4	0	15-15 and 15-16	4
7-1 thru 7-8	0	16-1 thru 16-10.....	0
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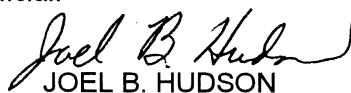
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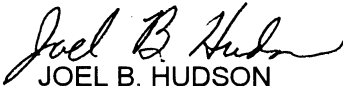
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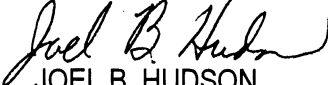
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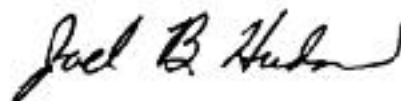
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SMALL CALIBER AMMUNITION
FSC 1305**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028-2 (Recommended Changes to Equipment Technical Publications) located in the back of this manual directly to Commander, U.S. Army TACOM, Armament Research, Development and Engineering Center, ATTN: AMSTA-AR-WEL-S, Picatinny Arsenal, NJ 07806-5000. You may also send in your recommended changes via electronic mail or by fax. Our e-mail address is LSB@PICA.ARMY.MIL. Our fax number is DSN 880-4633, Commercial (973) 724-4633. A reply will be furnished to you.

	Page
CHAPTER 1. INTRODUCTION	
1-1. Purpose	1-1
1-2. Scope	1-1
1-3. Key to Abbreviations and Symbols.	1-1
1-4. Metric Conversion Chart.	1-2
CHAPTER 2. SHOTGUN CARTRIDGES	
Cartridge, .410, Shotgun, No. M35	2-3
Cartridge, 10 Gage, Shotgun, Blank	2-5
Cartridge, 12 Gage, Shotgun, No. 00	2-7
Cartridge, 12 Gage, Shotgun, No. 00, M162.	2-9
Cartridge, 12 Gage, Shotgun, No. M19.	2-11
Cartridge, 12 Gage, Shotgun, No. M257.	2-13
Cartridge, 12 Gage, Shotgun, No. M274.	2-15
Cartridge, 12 Gage, Shotgun, Non-Lethal: Point Control, M1012.	2-17
Cartridge, 12 Gage, Shotgun, Non-Lethal: Crowd Dispersal, M1013	2-19
Cartridge, 12 Gage, Shotgun: Breaching, M1030	2-21
CHAPTER 3. CALIBER .22 CARTRIDGES	
Cartridge, Caliber .22, Ball, Long Rifle	3-3
Cartridge, Caliber .22, Ball, Long Rifle, M24.	3-5
Cartridge, Caliber .22, Ball, Hornet, M65	3-7
Cartridge, Caliber .22, Tracer, Long Rifle, M861	3-9
CHAPTER 4. CALIBER .30 CARBINE CARTRIDGES	
Cartridge, Caliber .30, Carbine, Ball, M1	4-3
Cartridge, Caliber .30, Carbine, Grenade, M6.	4-5
Cartridge, Dummy, Caliber .30, Carbine, M13	4-7
Cartridge, Caliber .30, Carbine, Ball, High Pressure Test, M18	4-9
Cartridge, Caliber .30, Carbine, Tracer, M27	4-11

*This manual supersedes TM 43-0001-27, 29 June 1981, including all changes.

	Page
CHAPTER 5.	CALIBER .30 RIFLE AND MACHINE GUN CARTRIDGES
	Cartridge, Caliber .30, Ball, High Pressure Test, M1 5-3
	Cartridge, Caliber .30, Tracer, M11..... 5-5
	Cartridge, Caliber .30, Armor Piercing, M2 5-7
	Cartridge, Caliber .30, Ball, M2..... 5-9
	Cartridge, Caliber .30, Grenade, M3 5-11
	Cartridge, Caliber .30, Armor Piercing Incendiary, M14 5-13
	Cartridge, Caliber .30, Ball, Frangible, M22 5-15
	Cartridge, Caliber .30, Tracer; M25..... 5-17
	Cartridge, Dummy, Caliber .30, M40..... 5-19
	Cartridge, Caliber .30, Ball, Match, M72 5-21
	Cartridge, Caliber .30, Blank, M1909 5-23
CHAPTER 6.	CALIBER .32 CARTRIDGES
	Cartridge, Caliber .32, Ball 6-3
CHAPTER 7.	CALIBER .38 CARTRIDGES
	Cartridge, Caliber .38, Ball 7-3
	Cartridge, Caliber .38, Ball, Special, M41 7-5
	Cartridge, Caliber .38, Wad Cutter 7-7
CHAPTER 8.	CALIBER .45 CARTRIDGES
	Cartridge, Caliber .45, Wad Cutter..... 8-3
	Cartridge, Caliber .45, Ball, High Pressure Test, M1 8-5
	Cartridge, Caliber .45, Blank, M9..... 8-7
	Cartridge, Caliber .45, Tracer, M26..... 8-9
	Cartridge, Caliber .45, Line Throwing, M32..... 8-11
	Cartridge, Caliber .45, Ball, M1911 8-13
	Cartridge, Caliber .45, Ball, Match, M1911 9-15
	Cartridge, Dummy, Caliber .45, M1921..... 8-17
CHAPTER 9.	CALIBER .50 CARTRIDGES
	Cartridge, Caliber .50, Ball, High Pressure Test, M1 9-3
	Cartridge, Caliber .50, Blank, M1 9-5
	Cartridge, Caliber .50, Incendiary, M1..... 9-7
	Cartridge, Caliber .50, Tracer, M1 9-9
	Cartridge, Caliber .50, Blank, M1A1..... 9-11
	Cartridge, Caliber .50, Ball, M2..... 9-13
	Cartridge, Caliber .50, Ball, Armor Piercing, M2..... 9-15
	Cartridge, Dummy, Caliber .50, M2..... 9-17
	Cartridge, Caliber .50, Ball, Armor Piercing Incendiary, M8 9-19
	Cartridge, Caliber .50, Tracer M10..... 9-21
	Cartridge, Caliber .50, Tracer; M17..... 9-23
	Cartridge, Caliber .50, Ball, Armor Piercing Incendiary-Tracer, M20 9-25
	Cartridge, Caliber .50, Incendiary, M23..... 9-27
	Cartridge, Caliber .50, Ball, M33..... 9-29
	Cartridge, Caliber .50, Ball, Spotter-Tracer, M48A1 9-31
	Cartridge, Caliber .50, Ball, Spotter-Tracer, M48A2 9-33
	Cartridge, Caliber .50, Ball, Plastic Practice, M858 9-35
	Cartridge, Caliber .50, Tracer, Plastic Practice, M860 9-37

	Page
CHAPTER 9. CALIBER .50 CARTRIDGES - Continued	
Cartridge, Caliber .50, Saboted Light Armor Penetrator (SLAP), M903	9-39
Cartridge, Caliber .50, Saboted Light Armor Penetrator-Tracer (SLAP-T),M962	9-41
Cartridge, Caliber .50, Ball Practice, T249E2	9-43
Cartridge, Caliber .50, Ball, High Pressure Test,T251	9-45
Cartridge, Caliber .50: Armor Piercing Incendiary (API), MK 211, MOD 0	9-47
CHAPTER 10. 5.56MM CARTRIDGES	
Cartridge, 5.56mm, Ball, M193	10-3
Cartridge, 5.56mm, Grenade, M195	10-5
Cartridge, 5.56mm, Tracer, M196	10-7
Cartridge, 5.56mm, High Pressure Test, M197	10-9
Cartridge, Dummy, 5.56mm, M199	10-11
Cartridge, 5.56mm, Blank, M200	10-13
Cartridge, Dummy, 5.56mm, M232	10-15
Cartridge, 5.56mm, Blank, M755	10-17
Cartridge, 5.56mm, Ball, M855	10-19
Cartridge, 5.56mm, Tracer, M856	10-21
Cartridge, 5.56mm, Plastic, Practice, M862	10-23
Cartridge, 5.56mm, Armor Piercing (AP), M995	10-25
CHAPTER 11. 7.62MM CARTRIDGES	
Cartridge, 7.62mm, Ball, M59	11-3
Cartridge, 7.62mm, High Pressure Test, M60	11-5
Cartridge, 7.62mm, Armor Piercing, M61	11-7
Cartridge, 7.62mm, Tracer, M62	11-9
Cartridge, 7.62mm, Tracer, M62 (Overhead Fire Mission)	11-11
Cartridge, Dummy, 7.62, M63	11-13
Cartridge, 7.62mm, Grenade, M64	11-15
Cartridge, 7.62mm, Ball, M80	11-17
Cartridge, 7.62mm, Ball, M80 (Overhead Fire Application)	11-19
Cartridge, 7.62mm, Blank, M82	11-21
Cartridge, 7.62mm, Ball, Special, M118	11-23
Cartridge, 7.62mm, Frangible, M160	11-25
Cartridge, Dummy, 7.62mm, M172	11-27
Cartridge, 7.62mm, Dim Tracer, M276	11-29
Cartridge, 7.62mm, Match, M852	11-31
Cartridge, 7.62mm: Armor Piercing (AP), M993	11-33
CHAPTER 12. 9MM CARTRIDGES	
Cartridge, 9mm, Ball	12-3
Cartridge, 9mm, Ball, NATO, M882	12-5
Cartridge, 9mm, Ball, High Pressure Test, M905	12-7
Cartridge, 9mm, MK243, Mod 0, Jacketed Hollow-Point	12-9
CHAPTER 13. 14.5MM CARTRIDGES	
Cartridge, 14.5mm, Trainer-Spotter, M181A1	13-3
Cartridge, 14.5mm, Trainer-Spotter, M182A1	13-5
Cartridge, 14.5mm, Trainer-Spotter, M183A1	13-7

CHAPTER 14.	20MM CARTRIDGES	
	Cartridge, Dummy, 20mm, M51A2	14-3
	Cartridge, 20mm, Armor Piercing Incendiary-Tracer, M52E1	14-5
	Cartridge, 20mm, Armor Piercing Incendiary, M53.....	14-7
	Cartridge, 20mm, Ball, High Pressure Test, M54A1	14-9
	Cartridge, 20mm, Target Practice, M55A2	14-11
	Cartridge, 20mm, High Explosive Incendiary, M56A3/M56A4	14-13
	Cartridge, 20mm, Armor Piercing-Tracer, M95	14-15
	Cartridge, 20mm, Incendiary, M96	14-17
	Cartridge, 20mm, High Explosive Incendiary, M97A2	14-19
	Cartridge, 20mm, Target Practice, M99A1	14-21
	Cartridge, 20mm, Target Practice, M204	14-23
	Cartridge, 20mm, Target Practice-Tracer, M206A1.....	14-25
	Cartridge, 20mm, High Explosive Incendiary, M210	14-27
	Cartridge, 20mm, Target Practice-Tracer, M220	14-29
	Cartridge, 20mm, High Explosive Incendiary-Tracer, M242/M242A1	14-31
	Cartridge, 20mm, High Explosive Incendiary-Tracer, Self-Destroying, M246/M246A1	14-33
	Cartridge, Dummy, 20mm, XM254.....	14-35
	Cartridge, 20mm, High Explosive Incendiary-Tracer, M599 Fuze Point-Detonating Self-Destroying M594	14-37
	Cartridge, 20mm, Armor Piercing Incendiary-Tracer, M601	14-39
	Cartridge, 20mm, Multipurpose Trace Self-Destroying, M940	14-41
CHAPTER 15.	25MM CARTRIDGES	
	Cartridge, 25mm, Armor Piercing Discarding Sabot-Tracer, M791	15-3
	Cartridge, 25mm, High Explosive Incendiary-Tracer, M792 With Fuze Point-Detonating Self-Destroying M758	15-5
	Cartridge, 25mm, Target Practice-Tracer, M793.....	15-7
	Cartridge, 25mm, Dummy, M794.....	15-9
	Cartridge, 25.4mm, Decoy, M839	15-11
	Cartridge, 25mm, Target Practice Discarding Sabot-Target, M910	15-13
	Cartridge, 25mm, Armor Piercing Fin Stabilized Discarding Sabot- Tracer, M919.....	15-15
CHAPTER 16.	30MM CARTRIDGES	
	Cartridge, 30mm, Target Practice, M788	16-3
	Cartridge, 30mm, High Explosive Dual Purpose, M789.....	16-5
	Cartridge, 30mm, Dummy, M848.....	16-7
	Cartridge, 30mm, Test, M883	16-9
CHAPTER 17.	POINT-DETONATING FUZES	
	Fuze, Point-Detonating: M505A3	17-3
	Fuze, Point-Detonating, Self-Destroying: M758	17-5
	Fuze, Point-Detonating: M759 (XM714E6).....	17-7

	Page
CHAPTER 18. ACCESSORIES	
General	18-1
Accessories for Cartridges, Caliber .50	18-3
Accessories for Cartridges, 5.56mm	18-5
Accessories for Cartridges, 7.621m	18-7
Accessories for Cartridges, 201nm	18-9
Accessories for Cartridges, 25mm	18-13
Accessories for Cartridges, 30mm	18-15

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**CHAPTER 1
INTRODUCTION**

1-1. PURPOSE

This manual is a reference handbook published as an aid in planning, training, familiarization and identification of small arms ammunition, ranging from 22 caliber through 30 millimeter and shotgun ammunition from .410 to 10 gage. This is the Federal Supply Class 1305. Operating instructions are contained in the appropriate weapons manuals.

1-2. SCOPE

a. For each item of materiel, there are illustrations and descriptions together with characteristics and related data. Included in the related data are weights, dimensions, performance data, shipping and storage data, type classification, and logistics control code (LCC). Refer to SC 1305/30-IL for weight, dimensions and cube of packing boxes for small arms ammunition.

b. Information concerning supply, operation, and maintenance of the items will be found in the publications referenced for those items. A complete listing of these publications is maintained in DA Pam 310 series indexes.

c. Within this manual, items with the following type classifications are included:

- (1) Standard (STD)
- (2) Contingency (CON)
- (3) Limited Procurement (LP)
- (4) Reclassified obsolete (OBS) for regular Army use, but used by National Guard or Reserve Units.
- (5) Reclassified . OBS for all Army use, but used by Marine Corps, Air Force or Navy.
- (6) Reclassified OBS, no users, but U.S. stocks remain.

d. Items with the following type classification are not included: Reclassified OBS for all U.S. use. No U.S. stocks remain. (Foreign use or stock may remain.)

e. Numerical values, such as weights, dimensions, candlepower, etc., are nominal values, except when

specified as maximum or minimum. Actual items may vary slightly from these values. Allowable limits can be obtained from the drawings indicated in the data sheets.

1-3. KEY TO ABBREVIATIONS AND SYMBOLS

A	Army
AF	Air Force
band.....	bandoleer
belt	linked ammo (cloth or metal)
bx	box
cal	caliber
cm	centimeter(s)
comm	commercial
ctg	cartridge
ctn	carton
DODIC	Department of Defense Identification Code
DODAC	Department of Defense Ammunition Code
ft	foot/feet
fps.....	feet per second
g	gram(s)
gr	grain(s)
GSA	General Services Administra- tion
H	Height
in.....	inch(es)
L	Length
m	meter(s)
MBR.....	Meet Ballistic Requirement
MC.....	Marine Corps
mm	millimeter(s)
MPa	Mega Pascal
mps	meters per second
mtl bx	metal box
mtl lnd bx	metal lined box
N	Navy
NATO.....	North Atlantic Treaty Organization
SCG	Storage Compatibility Group
psi.....	pounds per square inch
W	Width
wdn bx	wooden box
wrbnd bx	wirebound box
yd	yard(s)

1-4. METRIC CONVERSION CHART

For approximate conversions to/from metric measures see table 1-1.

Table 1-1. Metric Conversion Chart

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply By	To Find	Symbol
--------	---------------	-------------	---------	--------

LENGTH

in.	inches	2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.	kilometers	km

AREA

in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha

WEIGHT

oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t

VOLUME

tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft ³	cubic feet	0.03	cubic meters	m ³
yd ³	cubic yards	0.70	cubic meters	m ³

TEMPERATURE

Symbol	When You Know	Subtract	Multiply By	To Find	Symbol
°F	Fahrenheit	32	0.55	Celsius	°C

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply By	To Find	Symbol
--------	---------------	-------------	---------	--------

LENGTH

mm	millimeters	0.04	inches	in.
cm	centimeters	0.4	inches	in.
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi

AREA

cm ²	square centimeters	0.16	square inches	in ²
m ²	square meters	1.2	square yards	yd ²
km ²	square kilometers	0.4	square miles	mi ²
ha	hectares (10,000 m ²)	2.5	acres	

WEIGHT

g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	

VOLUME

ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m ³	cubic meters	35	cubic feet	ft ³
m ³	cubic meters	1.3	cubic yards	yd ³

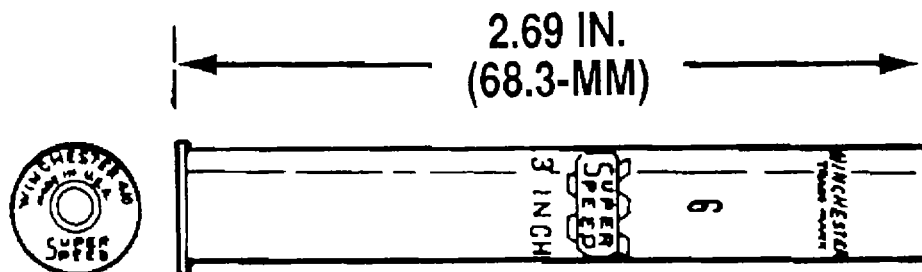
TEMPERATURE

Symbol	When You Know	Multiply By	Add	To Find	Symbol
°C	Celsius	1.8	32	Fahrenheit	°F

CHAPTER 2
SHOTGUN CARTRIDGES

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CARTRIDGE, .410, SHOTGUN, NO. M35



U
AR 5886

Type Classification:

OBS - MSR 11756003.

Use:

Rifle/Shotgun, Caliber .22/.410 Bore, Survival, M6. The cartridge is intended for use in survival weapons against small game.

Description:

The cartridge case is all aluminum, and is loaded with smokeless powder and No. 6 copper-coated lead shot.

Tabulated Data:

DODAC.....1305-A055
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile
 Weight430 gr
 Length.....2.69 in. (68.3 mm)
 TracerNA
 PrimerPercussion
 Fuze.....NA

Explosive:

TypeNA
 Weight.....NA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeSmokeless powder
 Weight.....7 gr

Performance:

Chamber pressure.....13,000 psi
 Velocity.....960 fps, 3 ft from muzzle

Shipping and Storage Data:

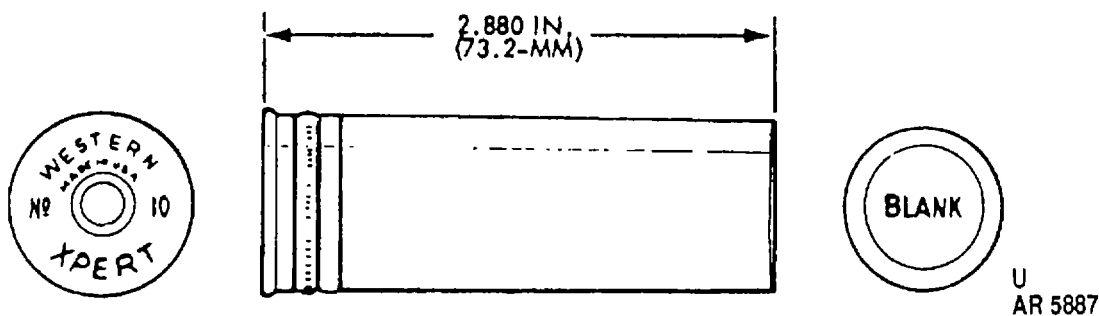
Quantity-distance class/
 SCG.....1.4S
 Storage code.....Class V
 DOT shipping classC
 DOT designationSMALL ARMS AMMUNITION
 Drawing number.....7553403

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 10 GAGE, SHOTGUN, BLANK



Type Classification:

STD - OTCM 36524.

Use:

This is an optional use item for reveille and retreat salutes, and is fired in the 3-inch gun, 75mm gun, 75mm howitzer, or 105mm howitzer.

Description:

The cartridge is similar to standard shotgun cartridges but it contains no lead shot. It has a paper cartridge case. The forward closing disc is marked "BLANK."

Function:

The cartridge is designed to produce a noise when initiated. It is used as a salute item in large caliber weapons. The blank is inserted either in a prepared cartridge case or in a breech block of the weapon being used.

Tabulated Data:

DODAC.....1305-A010
 UNO serial number0014
 UNO proper shipping
 nameCartridges for
 weapons, blank
 Weight290 gr

Length.....2.88 in. (73.2 mm)
 TracerNA
 Primer.....Percussion
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 Type Black powder
 Weight.....8 g

Performance:

Chamber pressureNA
 Velocity.....NA

Shipping and Storage Data:

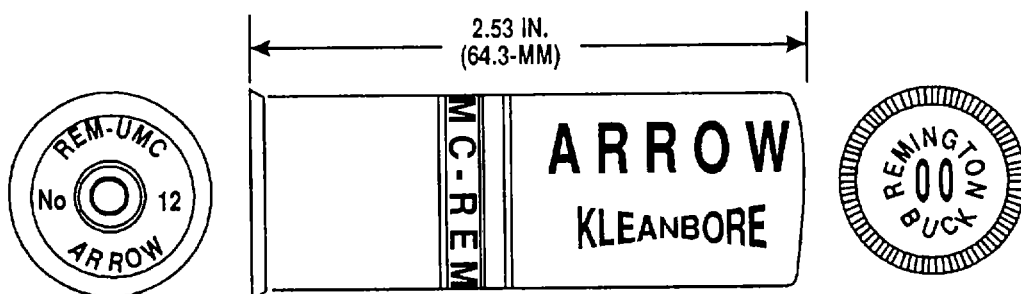
Quantity-distance class/
 SCG.....1.4S
 Storage codeClass V
 DOT shipping classC
 DOT designationSMALL ARMS
 AMMUNITION
 Drawing number10524632

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 12 GAGE, SHOTGUN, NO. 00



U
AR 5892

Type Classification:

STD - OTCM 36841.

Use:

Military issue shotgun, 2-3/4 inch chamber. The cartridge is intended for guard and combat use.

Description:

The cartridge case is paper, and is loaded with smokeless powder and No. 00 commercial shot.

Tabulated Data:

DODAC.....1305-A011
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile
 Weight791 gr
 Length.....2.53 in. (64.3 mm)
 TracerNA
 Primer.....Percussion
 Fuze.....NA
 Explosive:
 TypeNA

Weight NA
 Incendiary:
 TypeNA
 Weight..... NA
 Propellant:
 TypeSmokeless powder
 Weight..... MBR

Performance:

Chamber pressure.....11,000 psi
 Velocity1325 fps, 3 ft from muzzle

Shipping and Storage Data:

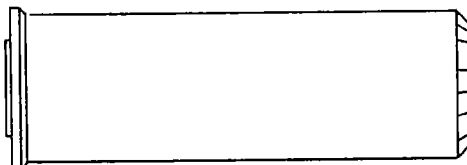
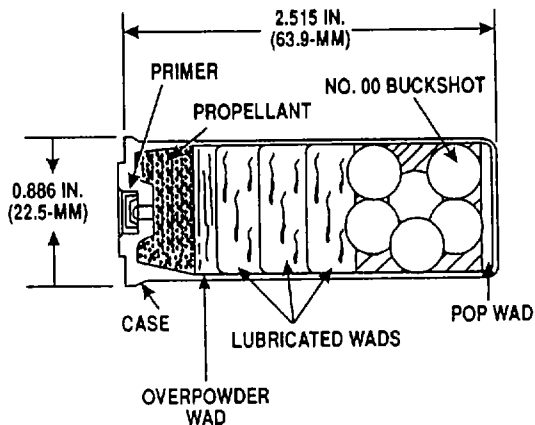
Quantity-distance class/
 SCG.....1.4S
 Storage code.....Class V
 DOT shipping classC
 DOT designationSMALL ARMS AMMUNITION
 Drawing number.....7553929

References:

SB 700-20
 TM 9-1005-303-14
 TM 9-1300-206

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CARTRIDGE, 12 GAGE, SHOTGUN, NO. M19



U
AR 5888

Type Classification:

STD - OTCM 36841.

Use:

Military issue shotgun, 2-3/4 inch chamber. The cartridge is intended for guard and combat use.

Description:

The cartridge case is all brass, and is loaded with smokeless powder and No. 00 commercial shot.

Tabulated Data:

DODAC.....1305-A011
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile
 Weight930 gr
 Length2.515 in. (63.9 mm)

TracerNA
 Primer.....Percussion
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeSmokeless powder
 Weight26 gr

Performance:

Chamber pressure11,000 psi
 Velocity1125 fps, 3 ft from muzzle

Shipping and Storage Data:

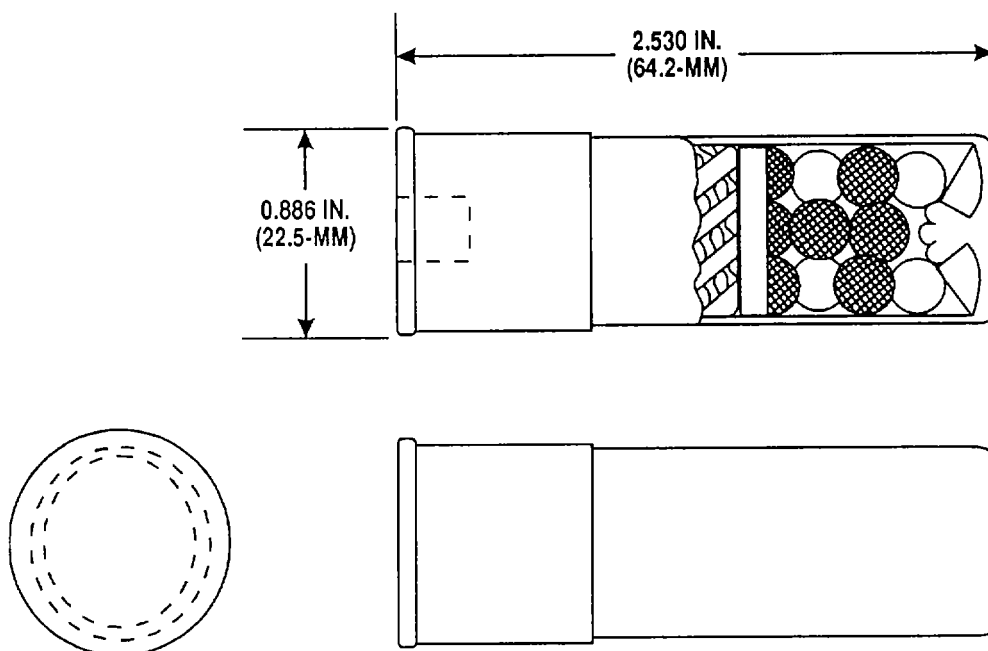
Quantity-distance class/
 SCG.....1.4S
 Storage code Class V

DOT shipping classC
DOT designationSMALL ARMS
 AMMUNITION
Drawing number10542446

References:

SB 700-20
TM 9-1005-303-14
TM 9-1300-206

CARTRIDGE, 12 GAGE, SHOTGUN, NO. M274



U
AR 5890

Type Classification:

OBS - MSR 11756003.

Use:

Military issue, riot-type shotgun, 20-inch barrel cylinder bore. The cartridge is intended for use against small game and for riot control weapons.

Description:

The cartridge case may be paper or plastic, and is loaded with smokeless powder and No. 4 hard chilled shot.

Tabulated Data:

DODAC.....1305-A011
 UNO serial number0012
 UNO proper shipping
 nameCartridges for
 weapons, inert
 projectile

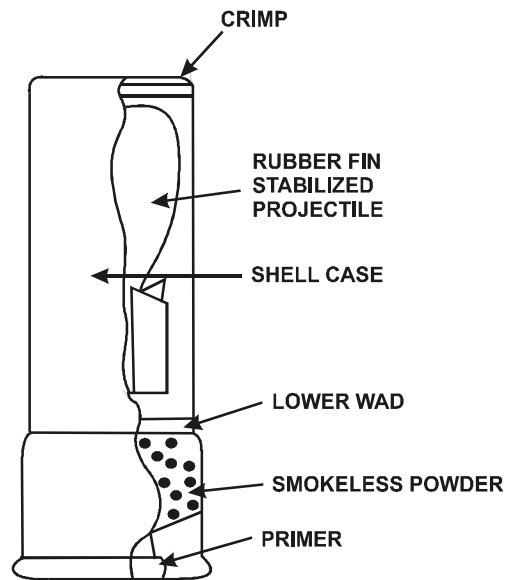
Weight740 gr
 Length.....2.53 in. (64.2 mm)
 TracerNA
 Primer.....Percussion
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeSmokeless powder
 WeightMBR

Performance:

Chamber pressure11,000 psi
 Velocity1255 fps, 3 ft from
 muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG.....1.4S
 Storage code.....Class V

CARTRIDGE, 12 GAGE SHOTGUN, NON-LETHAL: POINT CONTROL, M1012

AR9857

Type Classification:

STD - Sep 2000.

Use:

This cartridge is used by military forces to protect key facilities or for crowd control using non-lethal force. It gives the soldier the capability to stun or deter an individual by delivering a strong blow to the body without penetrating the body. The M1012 is fired from standard military 12 gage shotguns (Mossberg 500/590 and Winchester 1200). The effective range is 10 to 20 meters.

Description:

The M1012 has a clear cylindrical case and is loaded with a rubber fin stabilized projectile.

Functioning:

WARNING

DO NOT FIRE THE M1012 AT INDIVIDUALS CLOSER THAN 10 METERS. DEATH OR SERIOUS INJURY MAY OCCUR.

DO NOT FIRE THE M1012 ABOVE THE SHOULDER OF AN INDIVIDUAL. DEATH OR SERIOUS INJURY MAY OCCUR.

DO NOT SKIP FIRE THE M1012 TOWARDS AN INDIVIDUAL. SERIOUS INJURY MAY OCCUR.

THE M1012 MUST BE FIRED IN OPEN OR WELL VENTILATED AREAS TO PREVENT TOXIC FUME BUILDUP.

ALL PERSONNEL WITHIN 10 METERS OF WEAPON MUST WEAR SINGLE HEARING PROTECTION.

DURING TRAINING, DO NOT FIRE THE M1012 AT LIVE TARGETS. THE M1012 CAN BE LETHAL IF IMPROPERLY USED.

DURING TRAINING, EYE PROTECTION IS RECOMMENDED TO PROTECT GUNNER FROM PROJECTILE BOUNCE BACK.

Tabulated Data:

Cartridge:
 NSN 1305-01-470-2405
 DODAC 1305-AA51
 Weight 0.54 oz (15.5 g)
 Length (approx) 2.5 in. (6.35 cm)
 Diameter 0.75 in. (0.3 cm)
 Projectiles 1 rubber projectile
 Shell case Green tipped clear case

Submunition:
 Caliber 12 gage
 Length 1.7 in. (4.3 cm)
 Material Rubber
 Hardness 75 Durometer "A" scale
 Weight 0.2 oz (5.8 g)

Performance:

Velocity 500 fps (average)
 Maximum range 955 ft (291 m)
 Maximum effective range 66 ft (20 m)
 Minimum safety range 10 m
 Warranty 4 yrs from date of manufacture

Temperature Limits:

Firing:
 Lower -25°F
 Upper +125°F

Shipping and Storage Data:

Quantity distance class/SCG 1.4S
 UNO serial number 0012
 DOT proper shipping name CARTRIDGES, SMALL ARMS
 Explosive content 0.52 g

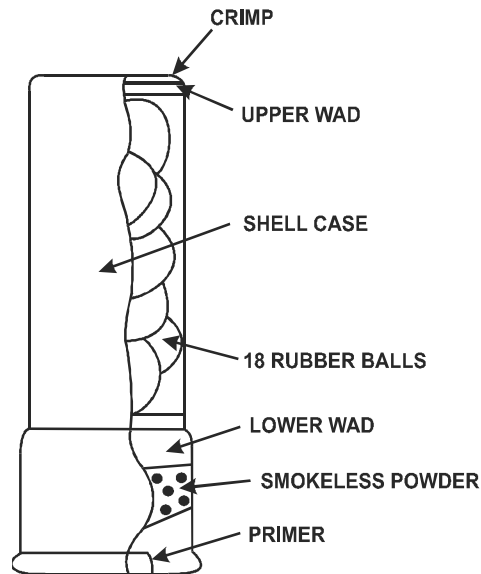
Packing:

Packing 160 shells per M2A1 metal container; 2 containers per wirebound box

Packing Box:
 Weight 33 lb
 Dimensions 14-1/2 x 12-3/4 x 8-3/8 in.
 Cube 0.9 cu ft
 Cartridge drawing number 12982874
 Packing drawing number 9396206

References:

SB -700-20
 TM 9-1005-303-14
 TM 9-1305-201-20&P
 TM 9-1305-201-34

CARTRIDGE, 12 GAGE SHOTGUN, NON-LETHAL: CROWD DISPERSAL, M1013

AR9858

Type Classification:

STD - Sep 2000.

Use:

This cartridge is used by military forces to protect key facilities or for crowd control using non-lethal force. It gives the soldier the capability to stun or deter an individual by delivering a strong blow to the body without penetrating the body. The M1013 is fired from standard military 12 gage shotguns (Mossberg 500/590 and Winchester 1200). The effective range is 10 to 20 meters.

Description:

The M1013 has a clear cylindrical case and is loaded with 18 rubber balls between an upper and lower wad.

Functioning:

WARNING

DO NOT FIRE THE M1013 AT INDIVIDUALS CLOSER THAN 10 METERS. DEATH OR SERIOUS INJURY MAY OCCUR.

DO NOT FIRE THE M1013 ABOVE THE SHOULDER OF AN INDIVIDUAL. DEATH OR SERIOUS INJURY MAY OCCUR.

DO NOT SKIP FIRE THE M1013 TOWARDS AN INDIVIDUAL. SERIOUS INJURY MAY OCCUR.

THE M1013 MUST BE FIRED IN OPEN OR WELL VENTILATED AREAS TO PREVENT TOXIC FUME BUILDUP.

ALL PERSONNEL WITHIN 10 METERS OF WEAPON MUST WEAR SINGLE HEARING PROTECTION.

DURING TRAINING, DO NOT FIRE THE M1013 AT LIVE TARGETS. THE M1013 CAN BE LETHAL IF IMPROPERLY USED.

DURING TRAINING, EYE PROTECTION IS RECOMMENDED TO PROTECT GUNNER FROM PROJECTILE BOUNCE BACK.

Tabulated Data:

Cartridge:
 NSN 1305-01-470-2139
 DODAC 1305-AA52
 Weight 0.56 oz (16 g)
 Length (approx) 2.5 in. (6.35 cm)
 Diameter 0.75 in. (0.3 cm)
 Projectiles 18 rubber balls
 Shell case Green tipped clear case

Submunition:
 Caliber 32
 Diameter 0.32 in. (0.8 cm)
 Material PVC Rubber Compound
 Hardness 75 Durometer "A" scale
 Weight 0.01 oz (0.25 g) each

Performance:

Velocity 900 fps (average)
 Maximum range 295 ft (90 m)
 Maximum effective range 66 ft (20 m)
 Minimum safety range 10 m
 Warranty 4 yrs from date of manufacture

Temperature Limits:

Firing:
 Lower -25°F
 Upper +125°F

Shipping and Storage Data:

Quantity distance class/SCG 1.4S
 UNO serial number 0012
 DOT proper shipping name CARTRIDGES, SMALL ARMS
 Explosive content 0.50 g

Packing:

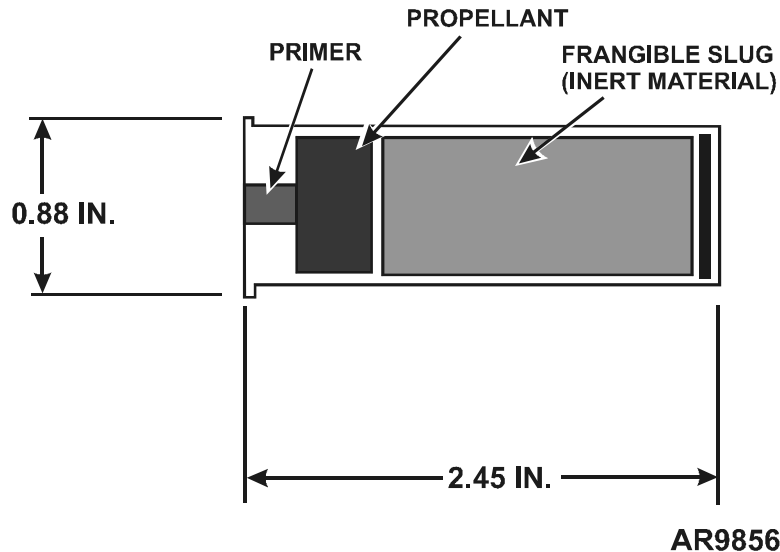
Packing 160 shells per M2A1 metal container; 2 containers per wirebound box

Packing Box:
 Weight 34 lb
 Dimensions 14-1/2 x 12-3/4 x 8-3/8 in.
 Cube 0.9 cu ft
 Cartridge drawing number 12982875
 Packing drawing number 9396206

References:

SB -700-20
 TM 9-1005-303-14
 TM 9-1305-201-20&P
 TM 9-1305-201-34

CARTRIDGE, 12 GAGE SHOTGUN: BREACHING, M1030



Type Classification:

TBD.

Use:

This cartridge is used to gain access through light doors and entryways. It is used with a standard shotgun.

Description:

The M1030 contains a frangible slug consisting of powdered steel with a wax binder. The cartridge is 2.45 inches long with a diameter of 0.88 inches.

Functioning:

When the percussion primer is struck, the propellant is ignited. The propelling gases expel the frangible slug against a target. The slug transmits the force over a specific area, such as a hinge or lock mechanism, without producing significant fragmentation that could injure the gunner.

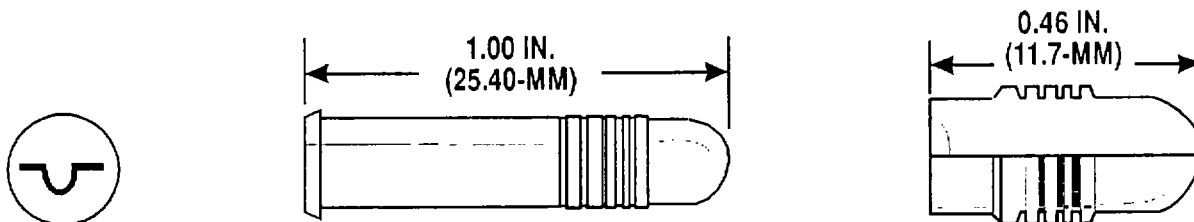
Tabulated Data:

NSN	1305-01-475-7440
DODAC	1305-AA54
UNO serial number	0339
Complete Round:	
Type	Breaching
Weight	TBD
Length	2.45 in.
Diameter	0.88 in.
Weapons used with.....	Winchester 1200, Mossberg 590
Projectile:	
Filler material	Powdered steel
Ogive	Plastic
Color.....	Clear w/brown tip
Weight	40 g
Fuze	None
Propelling Charge:	
Cartridge case.....	Brass case
Propellant	Herco, 23 gr (1.5 g)
Primer	Percussion, WIN 209

CHAPTER 3
CALIBER .22 CARTRIDGES

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CARTRIDGE, CALIBER .22, BALL, LONG RIFLE



U
AR 5895

Type Classification:

STD - OTCM 36841.

Use:

Subcaliber Rifle M2A1; Winchester Models 52 and 75; Remington Models M40X and 513T; Machine Gun Trainers M3 and M4. The cartridge is intended for marksmanship practice and match use.

Description:

BALL Cartridge. The cartridge is grade match.

Tabulated Data:

DODAC..... 1305-A086
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 52 gr
 Length..... 1 in. (25.4 mm)
 Tracer NA
 Primer Percussion (Rimfire)
 Fuze NA
 Explosive:
 Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type Smokeless powder
 Weight MBR

Performance:

Chamber pressure 24,000 psi
 Velocity 1100 fps, 15 ft from muzzle

Shipping and Storage Data:

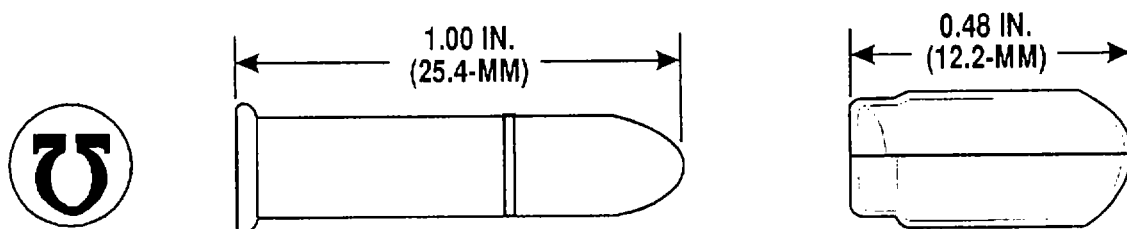
Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7553931

References:

SB 700-20
 TM 9-1005-206-14P/4
 TM 9-1005-226-14
 TM 9-1300-206

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CARTRIDGE, CALIBER .22, BALL, LONG RIFLE, M24



**U
AR 5893**

Type Classification:

OBS - MSR 11756003.

Use:

Subcaliber Rifle M2A1; Caliber .22 Rifle; Remington Models 40X and M513T; Steven's Model 416-2; Winchester Models 52 and 75; Machine Gun Trainers M3 and M4; pistols for gallery practice and training purposes. The cartridge is intended for use against small game for survival purposes.

Description:

BALL Cartridge.

Tabulated Data:

DODAC.....	1305-A086
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	53 gr
Length.....	1 in. (25.4 mm)
Tracer	NA
Primer	Percussion (Rimfire)
Fuze.....	NA

Explosive:

Type NA
Weight..... NA

Incendiary:

Type NA
Weight NA

Propellant:

Type Smokeless powder
Weight 2.5 gr

Projectile:

Weight 40.5 gr

Performance:

Chamber pressure 24,000 psi
Velocity 1185 fps, 15 ft from muzzle

Shipping and Storage Data:

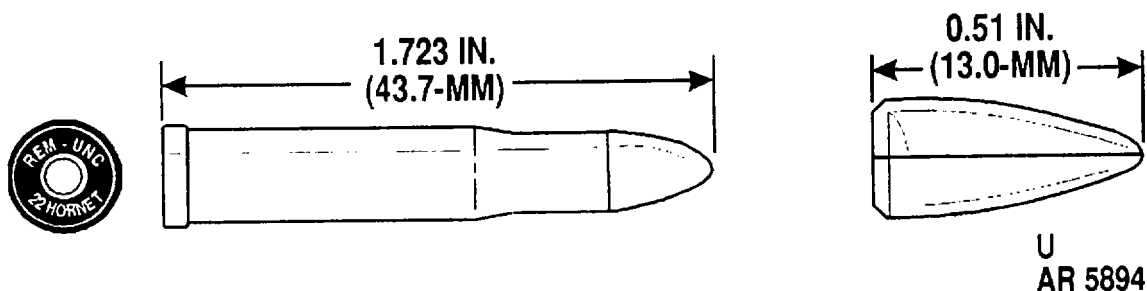
Quantity-distance class/
SCG 1.4S
Storage code..... Class V
DOT shipping class C
DOT designation SMALL ARMS AMMUNITION
Drawing number 7640995

References:

SB 700-20
TM 9-1005-206-14P/4
TM 9-1005-226-14
TM 9-1300-206

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CARTRIDGE, CALIBER .22, BALL, HORNET, M65



Type Classification:

OBS - MSR 11756003.

Use:

Caliber .22 Survival Weapons, M4 and M6. The cartridge is intended for use against small game.

Description:

BALL Cartridge.

Tabulated Data:

DODAC..... 1305-A088
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 103 gr
 Length..... 1.723 in. (43.7 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type Smokeless powder
 Weight 12.6 gr

Performance:

Chamber pressure 43,000 psi
 Velocity 2750 fps, 15 ft from muzzle

Shipping and Storage Data:

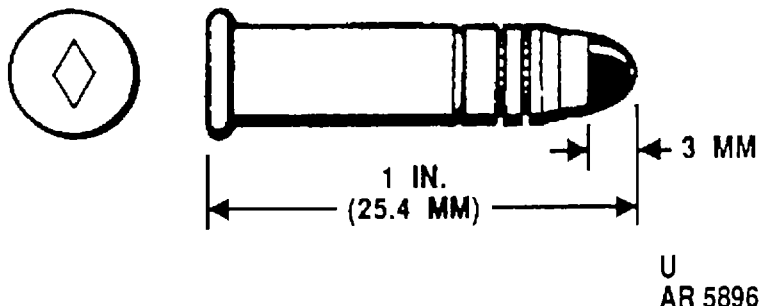
Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7553664

References:

SB 700-20
 TM 9-1005-206-14P/4
 TM 9-1005-226-14
 TM 9-1300-206

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CARTRIDGE, CALIBER .22, TRACER, LONG RIFLE, M861



Type Classification:

STD - DA Letter.

Use:

Rifle M16A1 when adapted with the M261 Conversion Kit. The M861 cartridge, when fired from the rim-fired adapter M16A1 Rifle mounted on the Brewster Device, will increase the training proficiency in scaled range tank gunnery exercise by providing a visual display for tracking purposes.

Description:

TRACER Cartridge. The cartridge M861, .22 Caliber Long Rifle, rimfire with tracer is a commercially produced item, manufactured by Dynamite Nobel AG. The M861 is designed to be fired in the M16A1 rifle when adapted with the M261 Conversion Kit. It can be fired in the automatic or semi-automatic modes. The tracer (red) is visible between 27 and 192 feet in daylight to allow the gunner to observe and sense the impact of the tracer with normal vision and sighting devices when fired on the scaled range. The M861 is identified by a red painted tip.

Tabulated Data:

DODAC..... 1305-A090
 UNO serial number 0012

UNO proper shipping

name	Cartridges for weapons, inert projectile
Weight	48 gr'
Length.....	1 in. (25.4 mm)
Tracer	NA
Primer.....	Percussion (Rimfire)
Fuze.....	NA
Explosive:	
Type	NA
Weight.....	NA
Incendiary:	
Type	NA
Weight.....	NA
Propellant:	
Type	Smokeless powder
Weight.....	2.5 gr

Performance:

Chamber pressure	24,000 psi
Velocity	- 990.75 fps, 302 m/s

Shipping and Storage Data:

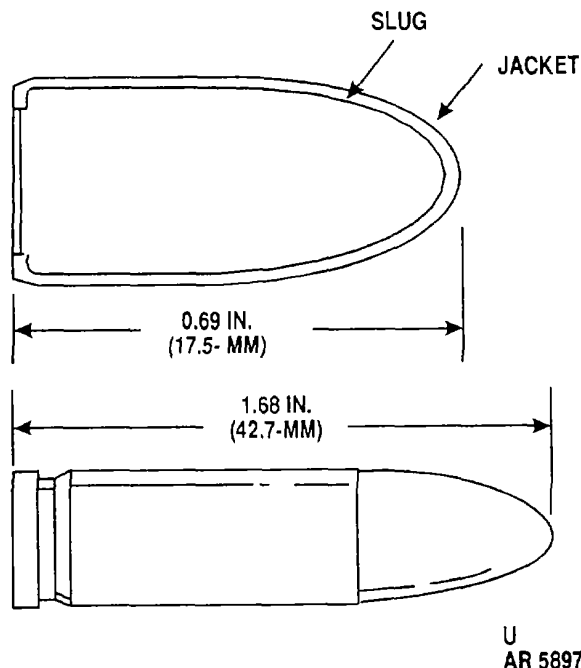
Quantity-distance class/	
SCG.....	1.4S
Storage code.....	Class V
DOT shipping class - C	
DOT designation	SMALL ARMS AMMUNITION
Drawing number	9343015

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CHAPTER 4
CALIBER .30 CARBINE CARTRIDGES

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CARTRIDGE, CALIBER .30, CARBINE, BAI,L, M1



Type Classification:

OBS - MSR 11756003.

Use:

Caliber .30, Carbine, MI, M2 or M3. The cartridge is intended for use against personnel and unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by the lack of bullet tip color code painting.

Tabulated Data:

DODAC..... 1305-A181
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 196 gr
 Length..... 1.68 in. (42.7 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type WC 820
 Weight..... 13 gr

Projectile:

Weight..... 111 gr

Performance:

Chamber pressure 40,000 psi
 Velocity..... 1900 fps, 53 ft from muzzle

Shipping and Storage Data:

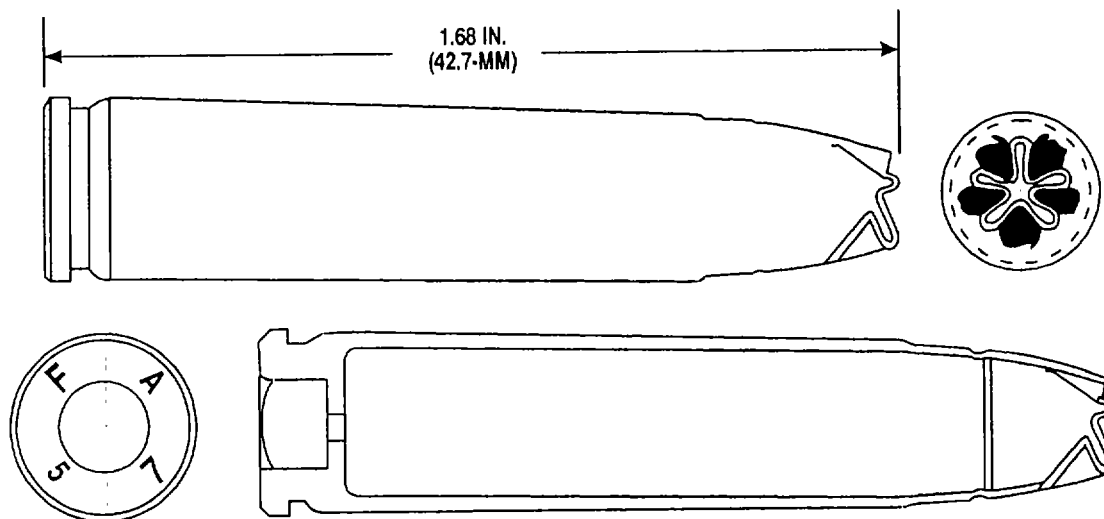
Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class V
 DOT shipping class - C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 6200954

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, CARBINES, GRENADE, M6



U
AR 5898

Type Classification:

OBS - MSR 11756003.

Use:

Caliber .30, Carbine, M1 or M2. The cartridge is currently used as a blank cartridge. The cartridge provides pressure to project grenades 1by using a grenade projection adapter.

Description:

GRENADE Cartridge. The cartridge identified by the rose-petal (rosette-crimp) closure of the cartridge case mouth.

Tabulated Data:

DODAC..... 1330-G837
 UNO serial number0014
 UNO proper shipping name Cartridges for weapons, blank
 Weight 103 gr
 Length..... 1.68 in. (42.7 min)
 Tracer NA
 Primer Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type IMR 480) and black powder
 Weight 21 gr

Performance:

Chamber pressure NA
 Velocity 145 fps, 5 ft from muzzle of projectile grenade

Shipping and Storage::

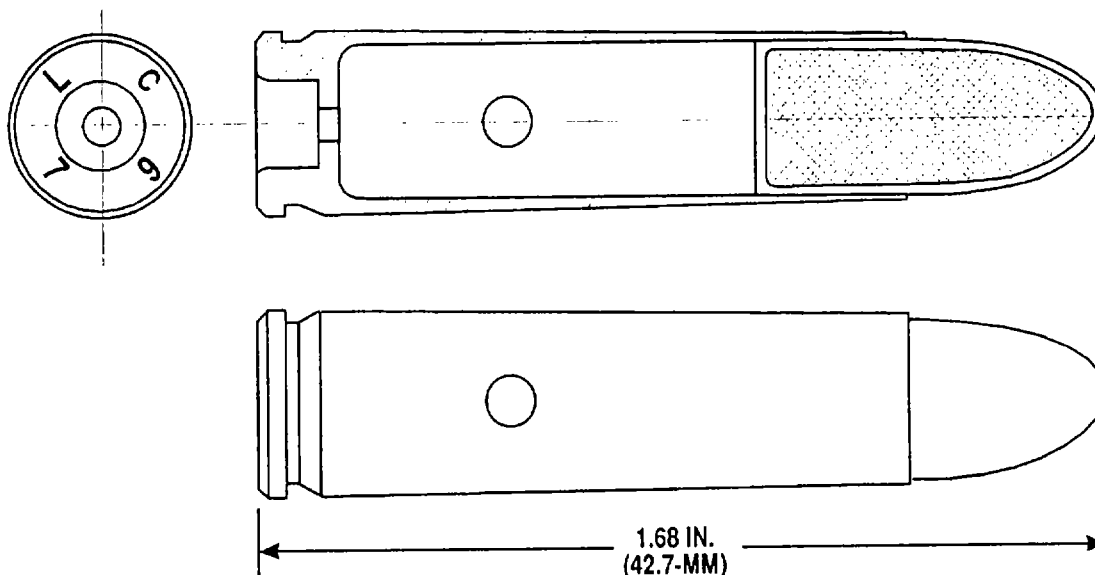
Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class V
 DO'I' shipping class - C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 6181079

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, DUMMY, CALIBER .30, CARBINE, M13



U
43 5000

Type Classification:

OBS - MSR 11756003.

Use:

Caliber .30, Carbine, M1 or M2. The cartridge is completely inert and is used for practice in loading weapons, for simulated firing to detect flinching of personnel when firing, and for inspecting and testing the mechanisms of the weapon.

Description:

DUMMY Cartridge. The cartridge is identified by two holes in the cartridge case and the absence of the primer.

Tabulated Data:

DODAC.....1305-A186
 UNO serial number0339
 UNO proper shipping
 nameCartridges for
 weapons, inert
 projectile
 Weight177 gr
 Length.....1.68 in. (42.7 mm)
 TracerNA

Primer.....NA
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....- NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeNA
 Weight.....NA

Performance:

Chamber pressure NA
 Velocity.....NA

Shipping and Storage Data:

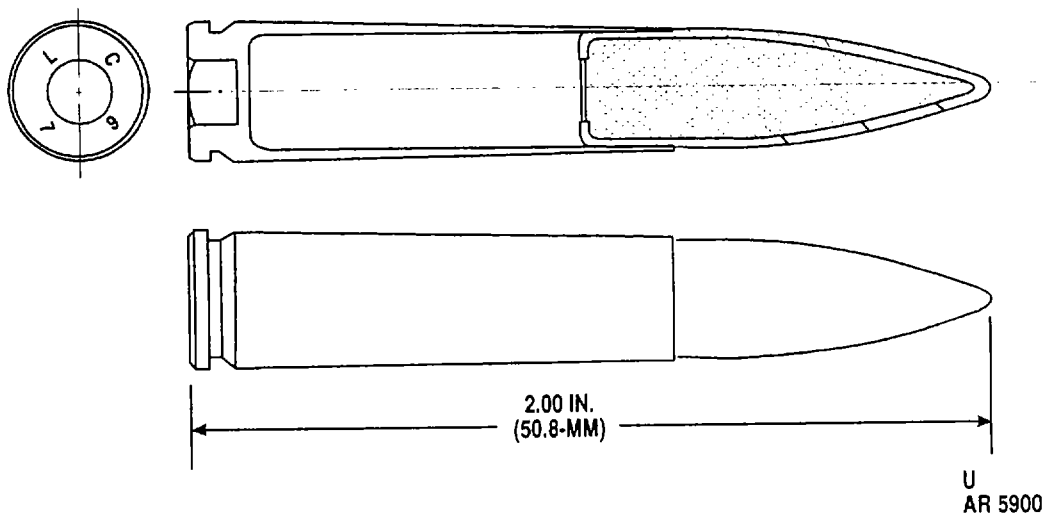
Quantity-distance class/
 SCG.....NA
 Storage code.....NA
 DOT shipping class - NA
 DOT designationNONEXPLOSIVE
 AMMUNITION
 Drawing number6177513

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, CARBINE, BALL, HIGH PRESSURE TEST, M18



Type Classification:

STD - OTCM 36841.

Use:

Caliber .30, Carbine, M1 and M2. The cartridge is used for proof firing of caliber .30 carbine weapons during manufacture, test, or repair.

Description:

BALL Cartridge. The cartridge is identified by the stannic-stained (silvered) cartridge case.

Tabulated Data:

DODAC.....1305-A185
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile
 Weight243 gr
 Length.....2 in. (50.8 mm)
 TracerNA
 Primer.....Percussion
 Fuze.....NA

Explosive:

TypeNA
 Weight.....NA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeHPC 5
 Weight.....14 gr

Performance:

Chamber pressure 47,500 psi
 Velocity.....NA

Shipping and Storage Data:

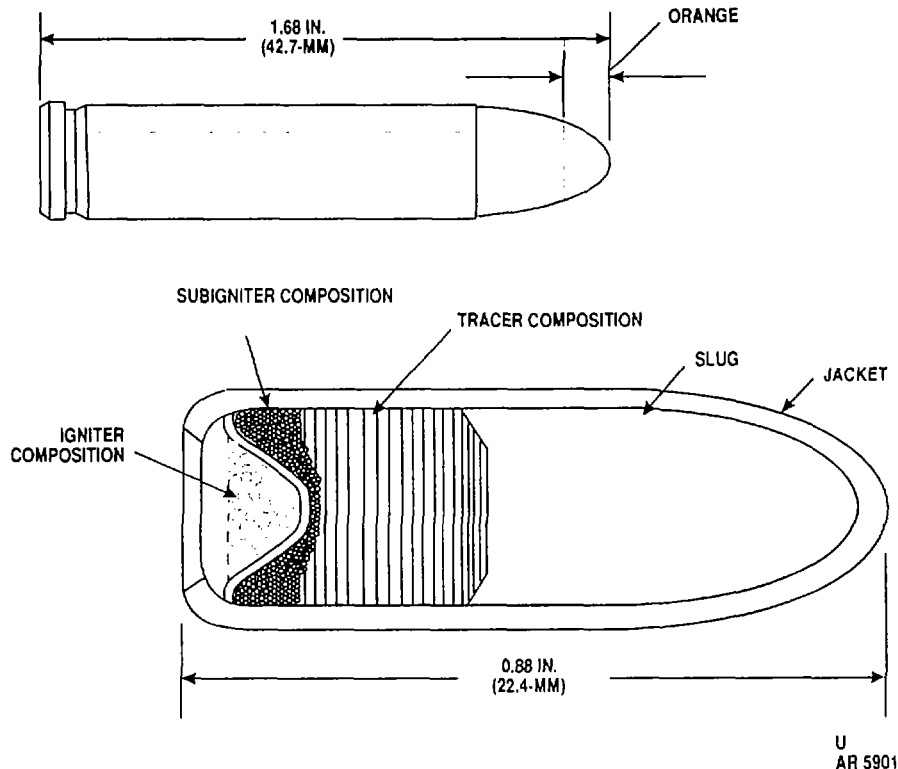
Quantity-distance class/
 SCG.....1.4S
 Storage code.....Class V
 DOT shipping class - C
 DOT designationSMALL ARMS
 AMMUNITION
 Drawing number.....6176267

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, CARBINE, TRACER, M27



Type Classification:

OBS - MSR 11756003.

Use:

Caliber .30, Carbine, M1 and M2.

Description:

TRACER Cartridge. The cartridge is identified by an orange bullet tip.

Function:

In flight, the bullet exhibits a visible trace of full luminosity from a point not greater than 100 yards from the muzzle of the weapon to a point not less than 400 yards from the muzzle.

Tabulated Data:

DODAC.....1305-A183
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile

Weight 191 gr
 Length..... 1.68 in. (42.7 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 820
 Weight..... 13 gr

Performance:

Chamber pressure 40,000 psi
 Velocity..... 1800 fps, 53 ft from muzzle

Shipping and Storage Data:

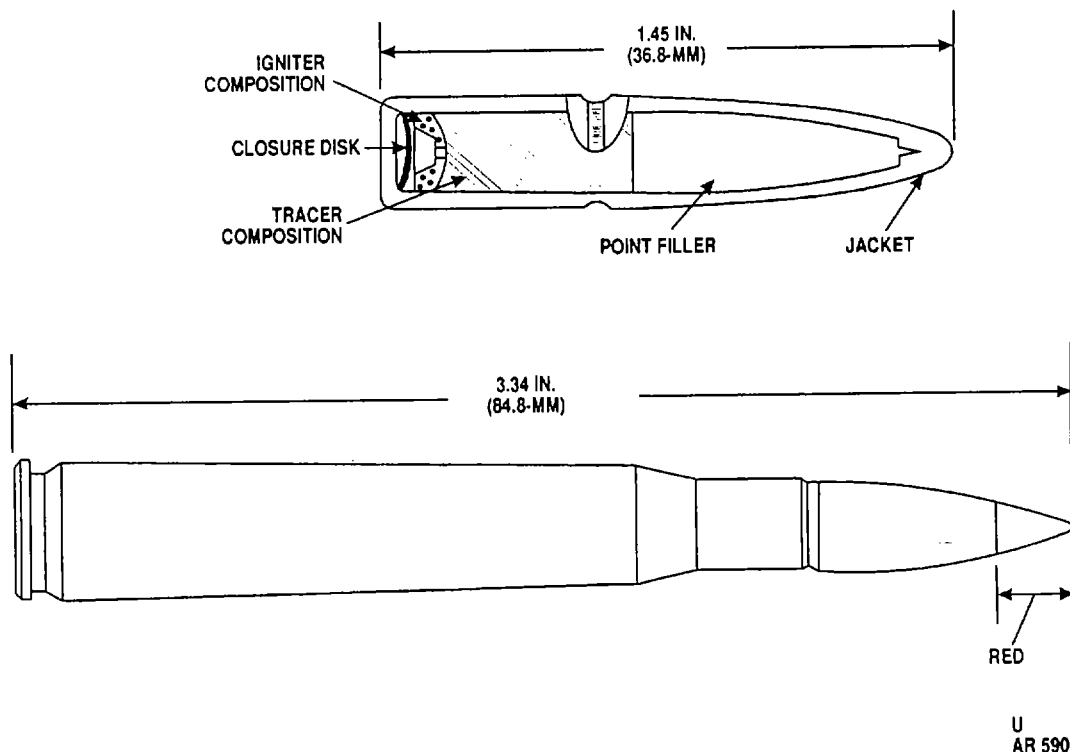
Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class V

CHAPTER 5
CALIBER .30 RIFLE AND MACHINE GUN CARTRIDGES

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CARTRIDGE, CALIBER .30, TRACER, M1



Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37, M1919A4 and M1919A6; and Rifle, Caliber .30, M1. The tracer element is intended to permit visible observation of the bullet's in-flight path, or trajectory, to the target.

Description:

TRACER Cartridge. The cartridge is identified by a red bullet tip.

Tabulated Data:

DODAC..... 1305-A231
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 399 gr

Length..... 3.34 in. (84.8 mm)
 Tracer R256
 Primer..... Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type IMR 4895
 Weight..... 50 gr

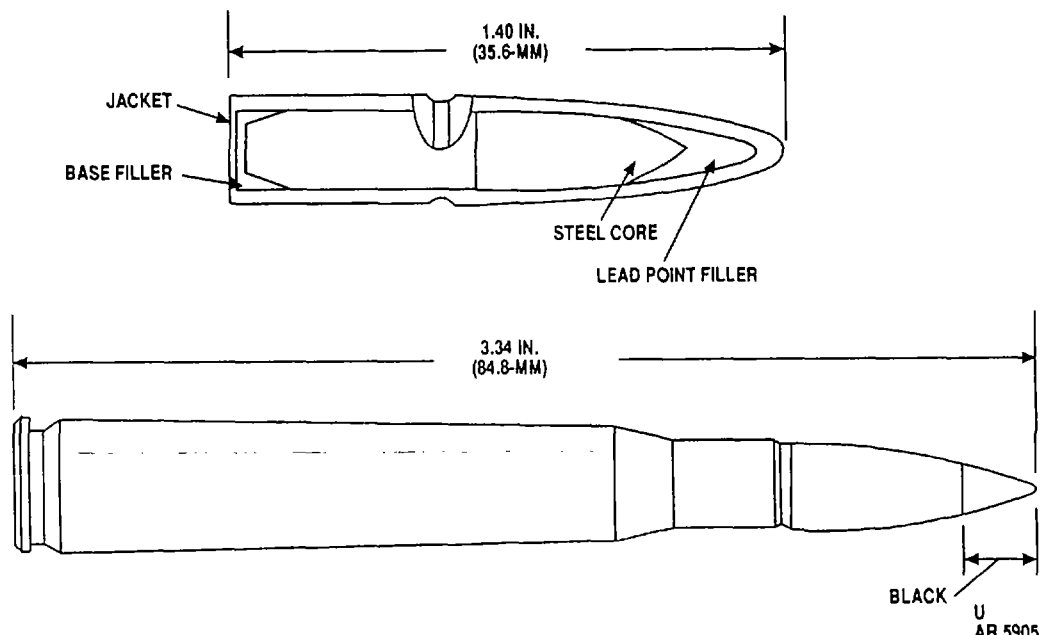
Performance:

Chamber pressure 52,000 psi
 Velocity 2665 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class V

CARTRIDGE, CALIBER .30, ARMOR PIERCING, M2



Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37, M1919A4 and M1919A6; and Rifle, Caliber .30, M1.

Description:

ARMOR PIERCING Cartridge. The cartridge is identified by a black bullet tip.

Function:

Penetration, fired at 7/8-inch thick homogeneous armor plate at 100 yards, will be not less than 0.42 inch.

Tabulated Data:

DODAC.....	1305-A202
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	424 gr
Length.....	3.34 in. (84.8 mm)
Tracer	NA
Primer.....	Percussion
Fuze.....	NA

Explosive:

Type NA
Weight..... NA

Incendiary:

Type NA
Weight..... NA

Propellant:

Type WC 852
Weight..... 55 gr

Projectile:

Weight..... 165.7 gr

Performance:

Chamber pressure 54,000 psi
Velocity..... 2715 fps, 78 ft from muzzle

Shipping and Storage Data:

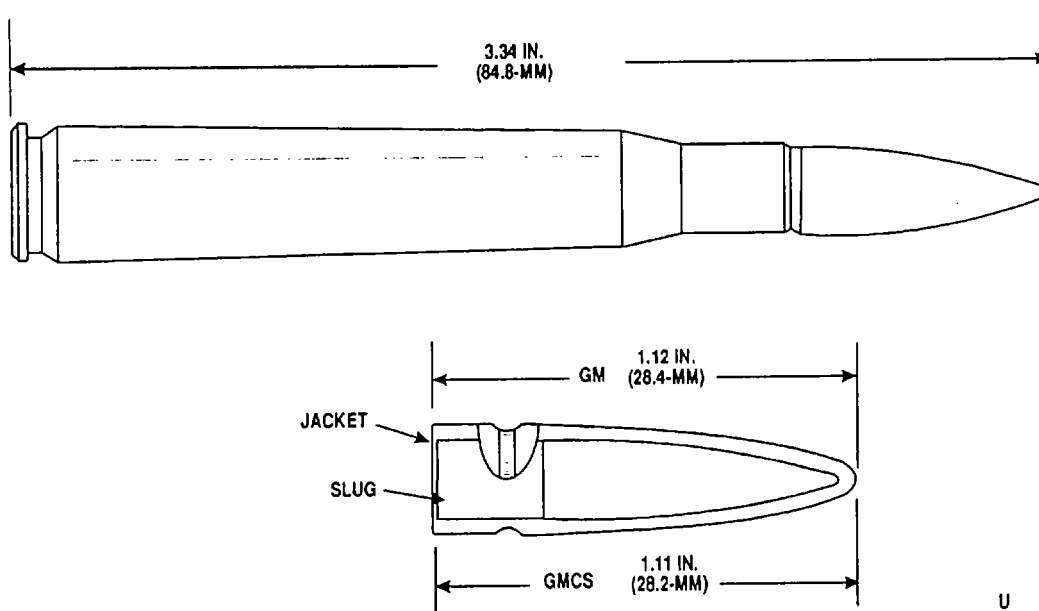
Quantity-distance class/
SCG..... 1.4S
Storage code..... Class V
DOT shipping class C
DOT designation SMALL ARMS AMMUNITION
Drawing number..... 6138194

References:

SB 700-20
TM 1005-222-12P/1
TM 9-1300-206

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CARTRIDGE, CALIBER .30, BALL, M2



U
AR 5904

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37, M1919A4 and M1919A6; and Rifle, Caliber .30, M1. The cartridge is intended for use against personnel or unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by a plain bullet tip.

Tabulated Data:

DODAC..... 1305-A212
 UNO serial number 0012
 UNO proper shipping
 name Cartridges for
 weapons, inert
 projectile
 Weight 416 gr
 Length..... 3.34 in. (84.8
 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type IMR 4895
 Weight 50 gr

Performance:

Chamber pressure..... 50,000 psi
 Velocity 2740 fps, 78 ft
 from muzzle

Shipping and Storage Data:

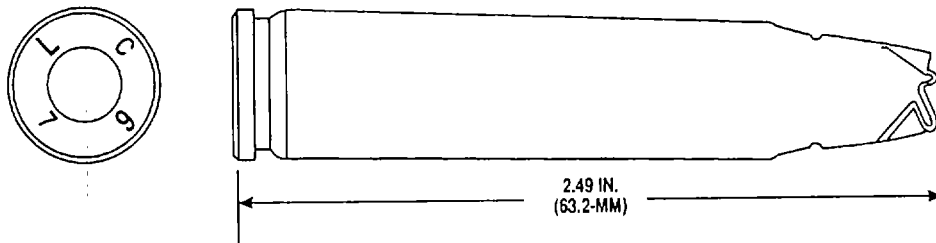
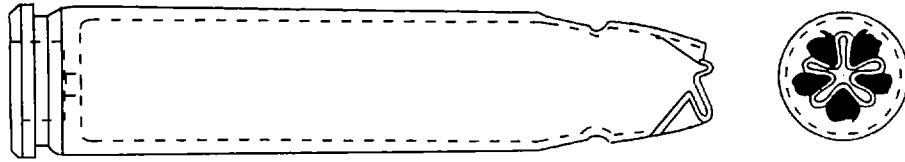
Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number 6137544

References:

SB 700-20
 TM 9-1005-222-12P/1
 TM 9-1300-206

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CARTRIDGE, CALIBER.30, GRENADE, M3



U
AR 5906

Type Classification:

OBS - MSR 11756003.

Use:

Rifle, Caliber .30, M1.

Description:

GRENADE Cartridge. The cartridge is identified by a rose-petal (rosette-crimped) closure of the cartridge case mouth.

Function:

The cartridge provides the pressure, on functioning, to project rifle grenades when using a grenade projection adapter.

Tabulated Data:

DODAC..... 1330-G838
 UNO serial number 0014
 UNO proper shipping
 name Cartridges for
 weapons, blank

Weight 248 gr
 Length..... 2.49 in. (63.2 mm)
 Tracer- NA
 Primer Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type IMR 489)5
 Weight..... 45 gr.

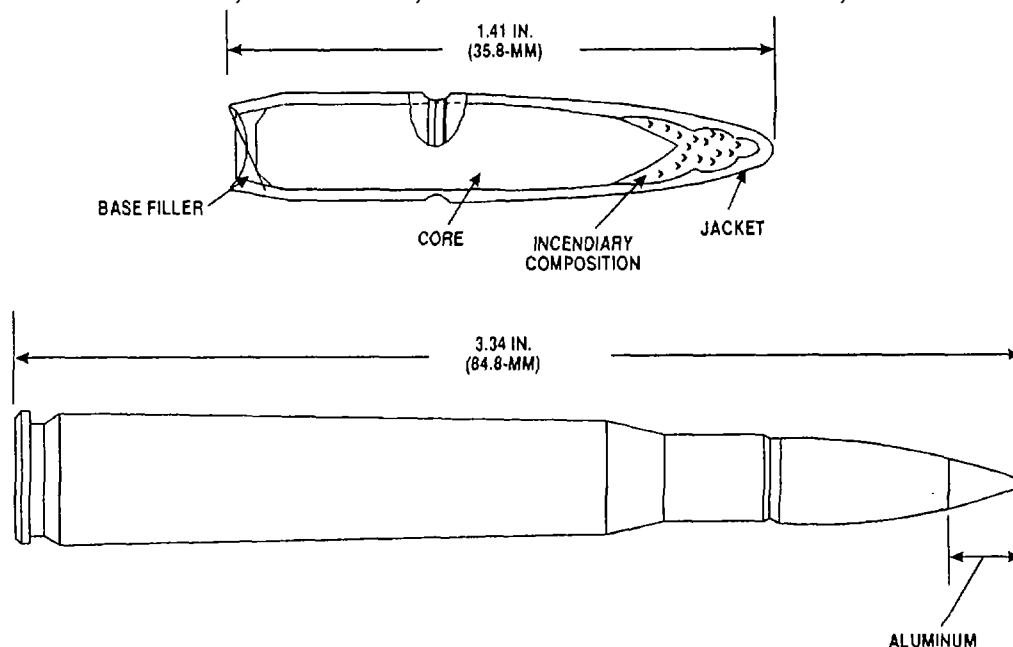
Performance:

Chamber pressure..... NA
 Velocity..... 180 fps, 5.5 ft from
 muzzle/projected
 grenade

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V

CARTRIDGE, CALIBER .30, ARMOR PIERCING INCENDIARY, M14



U
AR 5907

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37, M1919A4 and M1919A6; and Rifle, Caliber .30, M1.

Description:

ARMOR PIERCING INCENDIARY Cartridge. The cartridge is identified by an aluminum bullet tip.

FUNCTION:

Penetration, fired at a 7/8-inch steel plate at 100 yards, will not be less than 0.42 inch. Upon impact with a target, the incendiary composition bursts into flame and will ignite flammable material.

Tabulated Data:

DODAC..... 1305-A202
 UNO serial number 0012

UNO proper shipping

name	Cartridges for weapons, inert projectile
Weight	407 gr
Length.....	3.34 in. (84.8 mm)
Tracer	NA
Primer.....	Percussion
Fuze.....	NA
Explosive:	
Type	NA
Weight.....	NA
Incendiary:	
Type	IM 11
Weight.....	2 gr
Propellant:	
Type	WC 852
Weight.....	50 gr

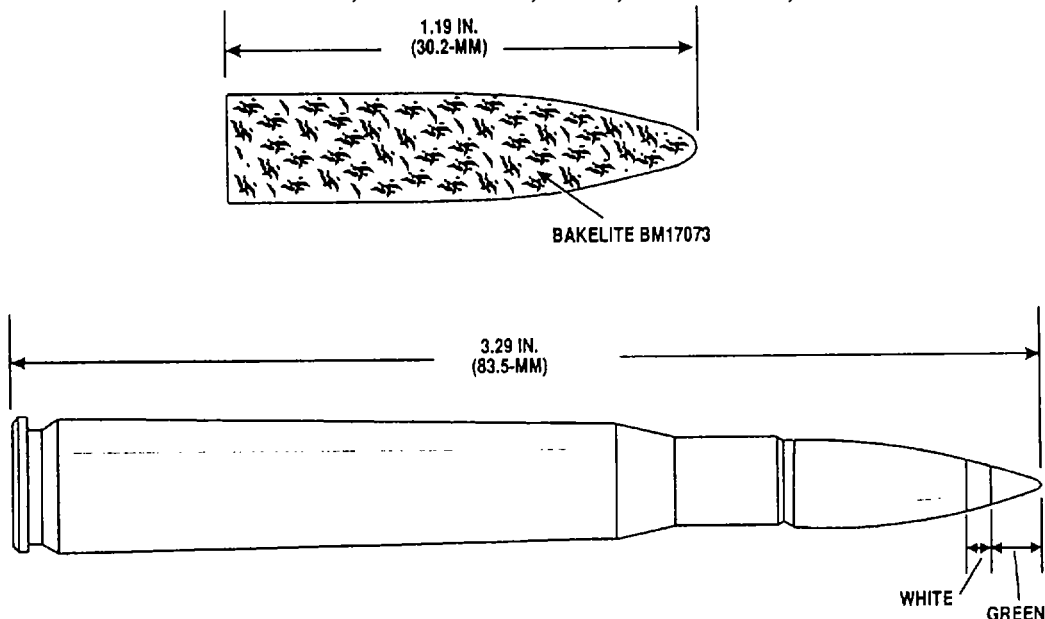
Performance

Chamber pressure..... 54,00() psi
 Velocity..... 2780 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V

CARTRIDGE, CALIBER .30, BALL, FRANGIBLE, M22



U
AR 5908

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37 and M1919A4; and Rifle, Caliber .30, M1.

Description:

BALL Cartridge. The cartridge is identified by a green bullet tip with a white ring to the rear of the green color.

Function:

The bullet disintegrates upon striking a hard or armored target, leaving a pencil-like mark to indicate a hit during gunnery practice.

Tabulated Data:

DODAC..... 1305-A220
 UNO serial number0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 320 gr
 Length..... 3.29 in. (83.5 mm)
 Tracer NA

Primer.....Percussion
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeSR 4759
 Weight..... 11 gr

Performance:

Chamber pressure.....NA
 Velocity..... 1320 fps, 53 ft from muzzle

Shipping and Storage Data:

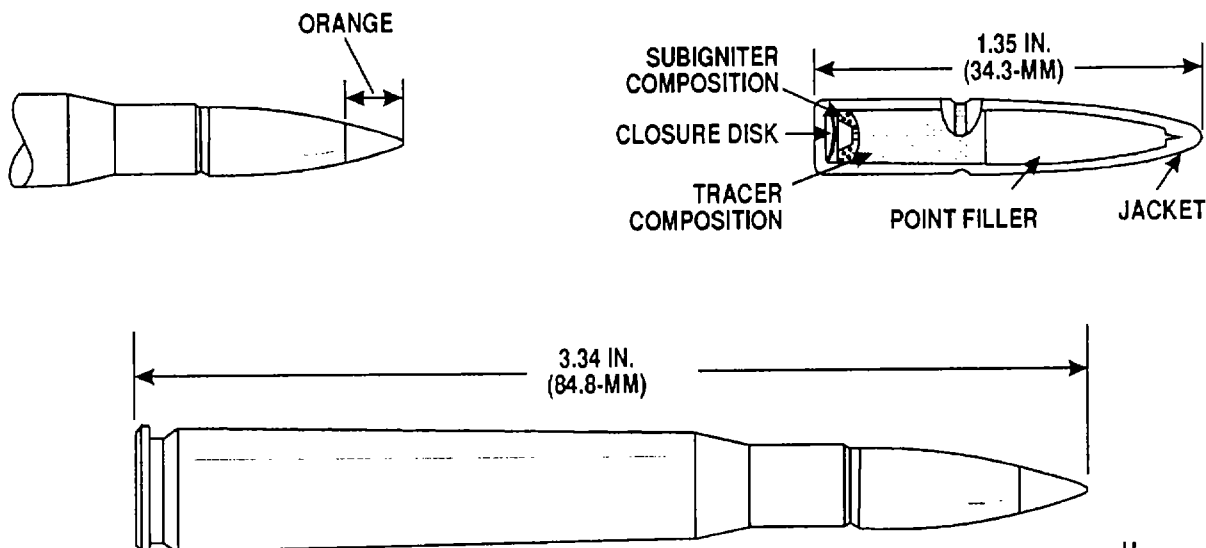
Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7640951

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, TRACER, M25



U
AR 5909

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M37, M1917A1, M1919A4, and M1919A6; and Rifle, Caliber .30, M1. The cartridge is intended for use against personnel and unarmored targets.

Description:

TRACER Cartridge. The cartridge is identified by an orange bullet tip.

Function:

In flight, the bullet exhibits a trace of full luminosity from a point not greater than 75 yards from the muzzle of the weapon to a point not less than 900 yards from the muzzle.

Tabulated Data:

DODAC.....1305-A230
 UNO serial number0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight401 gr
 Length.....3.34 in. (84.8 mm)
 TracerR321
 Primer.....Percussion
 Fuze.....NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type WC 852
 Weight 50 gr

Projectile:

Weight 145.5 gr

Performance:

Chamber pressure..... 50,000 psi
 Velocity 2665 fps, 78 ft from muzzle

Shipping and Storage Data:

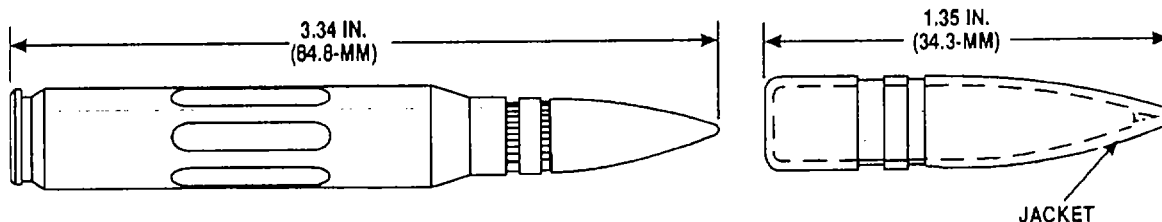
Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number 7640667 (brass case);
 7553949 (steel case)

References:

SB 700-20
 TM 9-1005-222-12P/1
 TM 9-1300-206

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CARTRIDGE, DUMMY, CALIBER .30, M40



U
AR 5910

Type Classification:

STD - OTCM 37119.

Use:

All caliber .30 weapons except carbine. The cartridge is inert, and is used for practice in loading weapons, for simulated firing to detect flinching of personnel when firing, and for inspecting and testing the mechanisms of small arms weapons.

Description:

DUMMY Cartridge. The cartridge is identified by six 1-inch longitudinal corrugations (flutings) in the cartridge case. In addition, there is no primer.

Tabulated Data:

DODAC..... 1305-A226
 Weight 268 gr
 Length..... 3.34 in. (84.8 mm)
 Tracer NA
 Primer..... NA
 Fuze..... NA

Explosive:

Type NA

Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type NA
 Weight NA

Performance:

Chamber pressure..... NA
 Velocity NA
 Shipping and Storage Data:

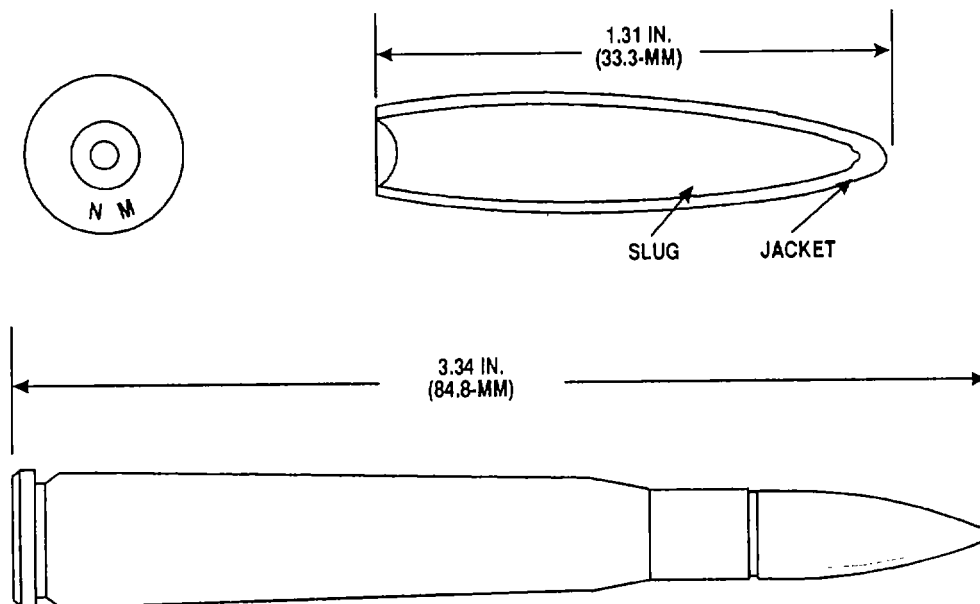
Quantity-distance class/
 SCG NA
 Storage code..... NA
 DOT shipping class NA
 DOT designation NONEXPLOSIVE
 AMMUNITION
 Drawing number 7553591

References:

SB 700-20
 TM 9-1005-222-12P/1
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, BALL, MATCH, M72



Type Classification:

STD - OTCM 37119.

Use:

Rifle, Caliber .30, M1; and Rifle, Caliber .30, National Match. The cartridge is designed to be fired only in weapons designated as competition rifles.

Description:

BALL Cartridge. The cartridge is identified by head stampings on the base of the cartridge case with either the initials NM (National Match) or the word MATCH. The primer is uncrimped, the bullet has no crimped cannelure, and the case is not crimped to the bullet.

Tabulated Data:

DODAC..... 1305-A247
 UNO serial number 0012
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight 425 gr
 Length..... 3.34 in. (84.8 mm)
 Tracer NA
 Primer..... Percussion

U
AR 5911

Fuze..... NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type..... NA
 Weight NA
 Propellant:
 Type..... IMR 4895
 Weight 50 gr
 Performance:
 Chamber pressure..... 50,000 psi
 Velocity 2640 fps, 78 ft from muzzle

Shipping and Storage Data:

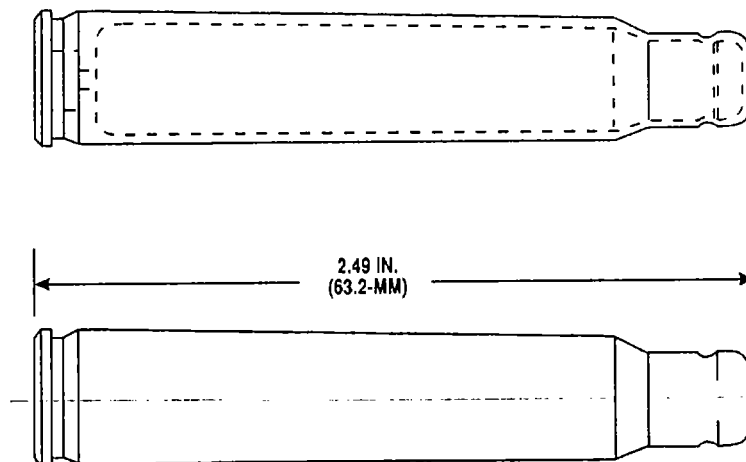
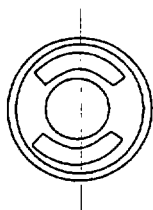
Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 8595432

References:

SB 700-20
 TM 9-1005-222-12P/1
 TM 9-1300-206

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CARTRIDGE, CALIBER .30, BLANK, M1909



U
AR 5912

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .30, M1919A4 and M1919A6; and Rifle, Caliber .30, M1. The cartridge is used for simulated firing in training or for saluting purposes.

Description:

BLANK Cartridge. The cartridge is identified by the absence of a bullet and has a crimped cartridge case mouth.

Tabulated Data:

DODAC..... 1305-A222
 UNO serial number 0014
 UNO proper shipping name Cartridges for weapons, blank
 Weight 218 gr
 Length..... 2.49 in. (63.2 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type SR 4990
 Weight..... 12 gr

Performance:

Chamber pressure..... NA
 Velocity..... NA

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number 6006152

References:

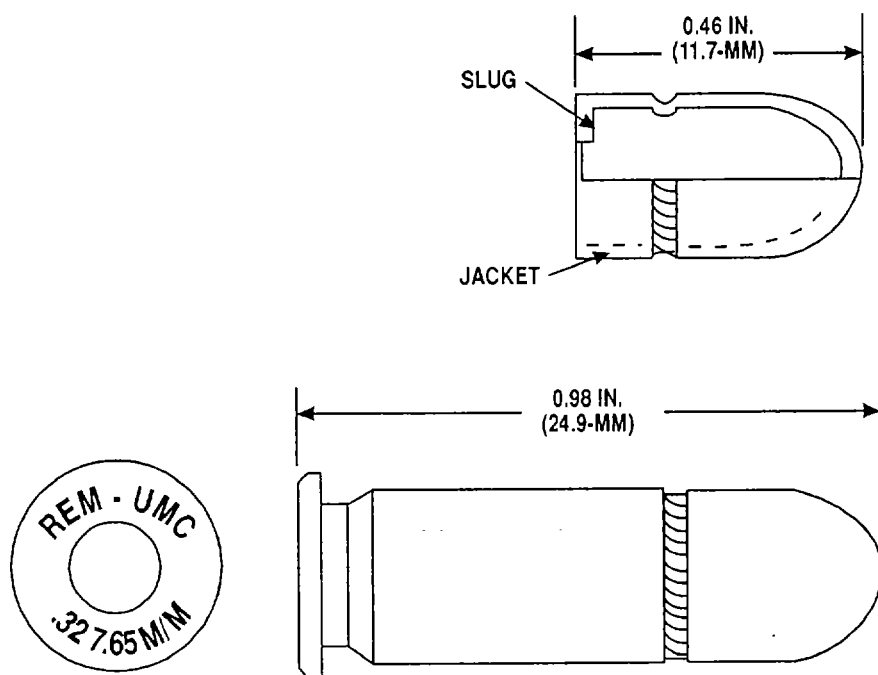
SB 700-20
 TM 9-1005-222-12P/1
 TM 9-1300-206

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CHAPTER 6
CALIBER .32 CARTRIDGES

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CARTRIDGE, CALIBER .32, BALL



U
AR 5913

Type Classification:

Commercial.

Use:

Caliber .32 weapons. The cartridge is used in caliber .32 automatic pistols for defensive use against personnel.

Description:

BALL Cartridge.

Tabulated Data:

DODAC..... 1305-A350
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 115 gr
 Length..... 0.98 in. (24.9 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA
 Explosive:

Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type Smokeless powder
 Weight..... MBR

Performance:
 Chamber pressure..... 15,000 psi
 Velocity..... 900 fps, 15 ft from muzzle

Shipping and Storage Data:

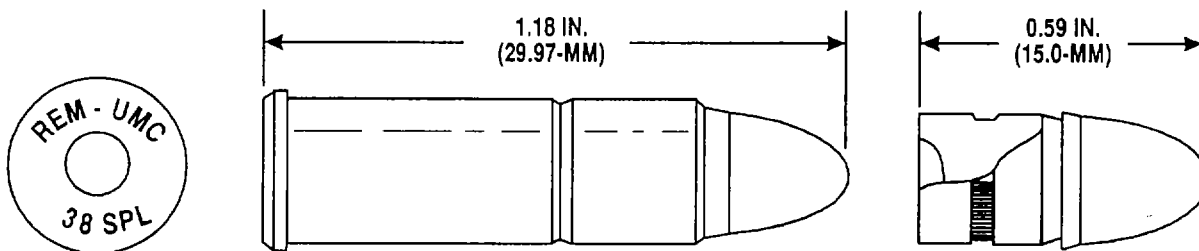
Quantity-distance class/
 SCG 1.4S
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 10524631
 References:
 SB 700-20
 TM 9-1005-206-14P/3
 TM 9-1300-206

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CHAPTER 7
CALIBER .38 CARTRIDGES

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CARTRIDGE, CALIBER .38, BALL



U
AR 5914

Type Classification:

OBS - MSR 11756003.

Use:

Caliber .38 weapons. The cartridge is for CONUS-guard or security use in caliber .38 weapons.

Description:

BALL Cartridge. The cartridge has an unjacketed lead bullet.

Tabulated Data:

DODAC.....	1305-A408
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	196 gr
Length.....	1.18 in. (29.97 mm)
Tracer	NA
Primer.....	Percussion
Fuze.....	NA
Explosive:	
Type	NA

Weight.....	NA
Incendiary:	
Type	NA
Weight.....	NA
Propellant:	
Type	Smokeless powder
Weight.....	MBR

Performance:

Chamber pressure.....	13,000 psi
Velocity.....	725 fps, 15 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG	1.4S
Storage code.....	Class V
DOT shipping class	C
DOT designation	SMALL ARMS AMMUNITION
Drawing .number.....	10524005

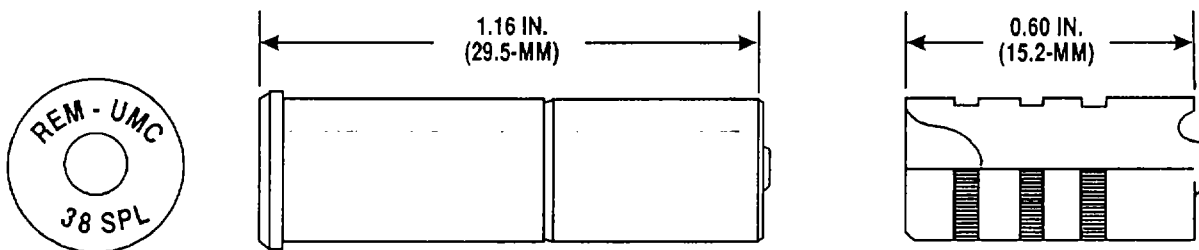
References:

SB 700-20
 TM 9-1005-206-14&P-1
 TM 9-1005-206-14P/3
 TM 9-1300-206

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CARTRIDGE, CALIBER .38, WAD CUTTER



U
AR 5915

Type Classification:

Commercial.

Use:

Revolver, Special, S & W, K-38. The cartridge is used only in pistol competition firing and marksmanship training.

Description:

WAD CUTTER Cartridge.

Function:

The bullet is designed with a concave forward end to act as a paper punch cutting a clean hole in targets.

Tabulated Data:

DODAC.....	1305-A404
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	220 gr
Length	1.16 in. (29.5 mm)
Tracer	NA
Primer.....	Percussion
Fuze.....	NA

Explosive:

Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	Smokeless powder
Weight	MBR

Performance:

Chamber pressure.....	16,000 psi
Velocity	800 fps, 15 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG	1.4S
Storage code.....	Class V
DOT shipping class	C
DOT designation	SMALL ARMS AMMUNITION
Drawing number.....	10521459

References:

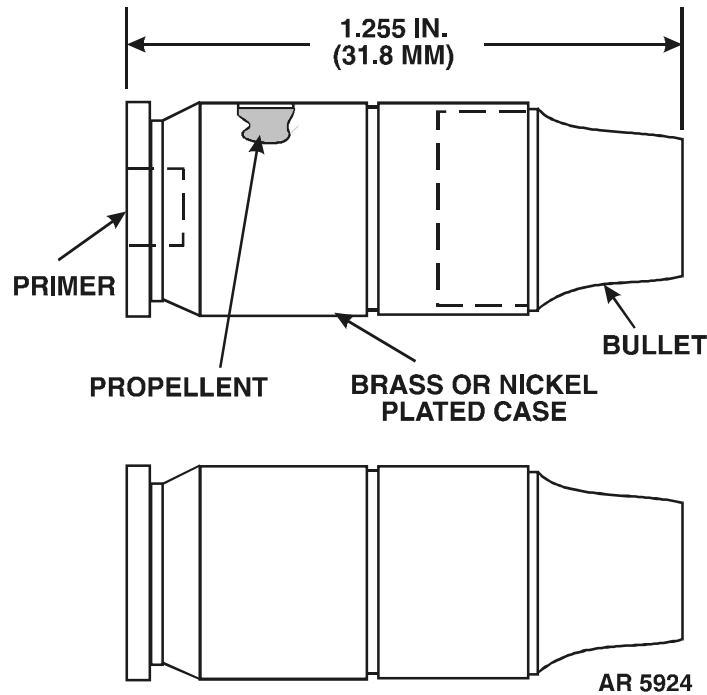
SB 700-20
 TM 9-1005-206-14&P-1
 TM 9-1005-206-14P/3
 TM 9-1300-206

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CHAPTER 8
CALIBER .45 CARTRIDGES

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CARTRIDGE, CALIBER .45, WAD CUTTER



Type Classification:

OBS - MSR 08836015.

Use:

Pistol, Caliber .45, M1911A1; and Pistol, Caliber .45, National Match.

Description:

WAD CUTTER Cartridge. The cartridge is identified by the bullet shape which has the general appearance of a truncated cone.

Function:

The ogive of the bullet has a sharp shoulder that acts as a hole punch to cut a clean hole in the target.

Tabulated Data:

DODAC	1305-A482
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	330 gr
Length	1.255 in. (31.8 mm)
Tracer	NA
Primer	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	Smokeless powder
Weight	MBR
Projectile:	
Weight	185 gr

Performance:

Chamber pressure..... 18,000 psi
Velocity 765 fps, 15 ft
from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG..... 1.4S
Storage code Class V
DOT shipping class C

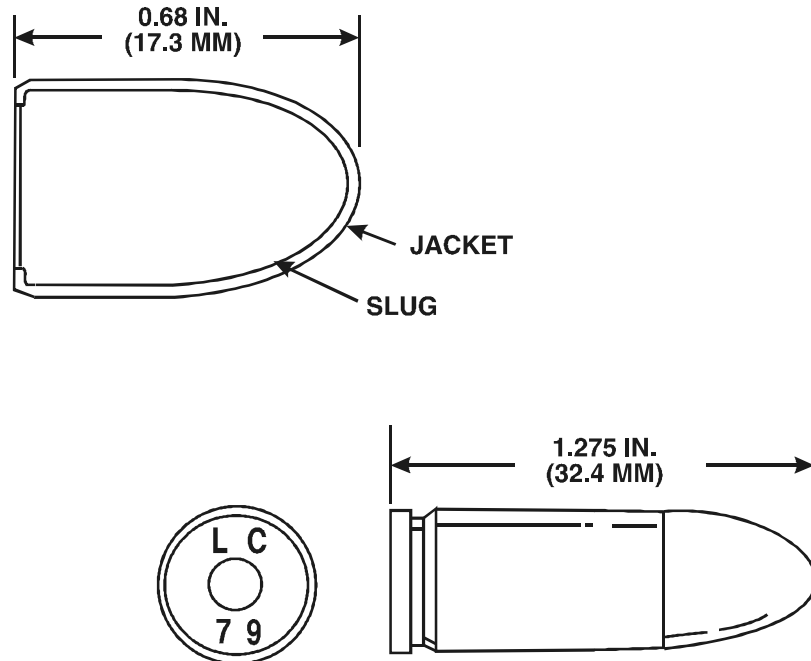
DOT designation..... SMALL ARMS
AMMUNITION
Drawing number 10521458

References:

SB 700-20
TM 9-1005-211-12
AR 385-64
DA Pam 385-64



CARTRIDGE, CALIBER .45, BALL, HIGH PRESSURE TEST, M1



AR 5921

Type Classification:

STD - OTCM 36841.

Use:

Test of all caliber .45 weapons. The cartridge is for proof testing caliber .45 pistols and submachine guns during manufacture, test, or repair.

Description:

BALL Cartridge. The cartridge is identified by a stannic-stained (silvered) cartridge case.

Tabulated Data:

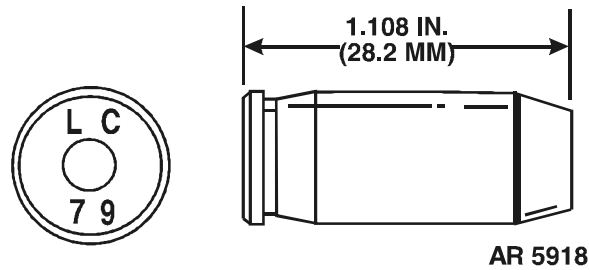
DODAC 1305-A480
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile

Weight 332 gr
 Length 1.275 in. (32.4 mm)
 Tracer NA
 Primer Percussion
 Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type SR 7970
 Weight 7 gr
 Projectile:
 Weight 234-236 gr

Performance:

Chamber pressure 22,000 psi
 Velocity NA

CARTRIDGE, CALBIER .45, BLANK, M9



Type Classification:

STD - AMCTC 505.

Use:

Pistol, Automatic, Caliber .45, M1911A1. The cartridge is used for simulated firing in training maneuvers and for saluting purposes.

Description:

BLANK Cartridge. The cartridge is identified by the absence of a bullet and the tapered mouth of the cartridge case.

Tabulated Data:

DODAC	1305-A476
UNO serial number	0014
UNO proper shipping name	Cartridges for weapons, blank
Weight	104 gr
Length	1.108 in. (28.2 mm)
Tracer	NA
Primer	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA

Incendiary:

Type	NA
Weight	NA

Propellant:

Type	SR 4990
Weight	10 gr

Projectile:

Weight	NA
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Performance:

Chamber pressure	NA
Velocity	NA

Shipping and Storage Data:

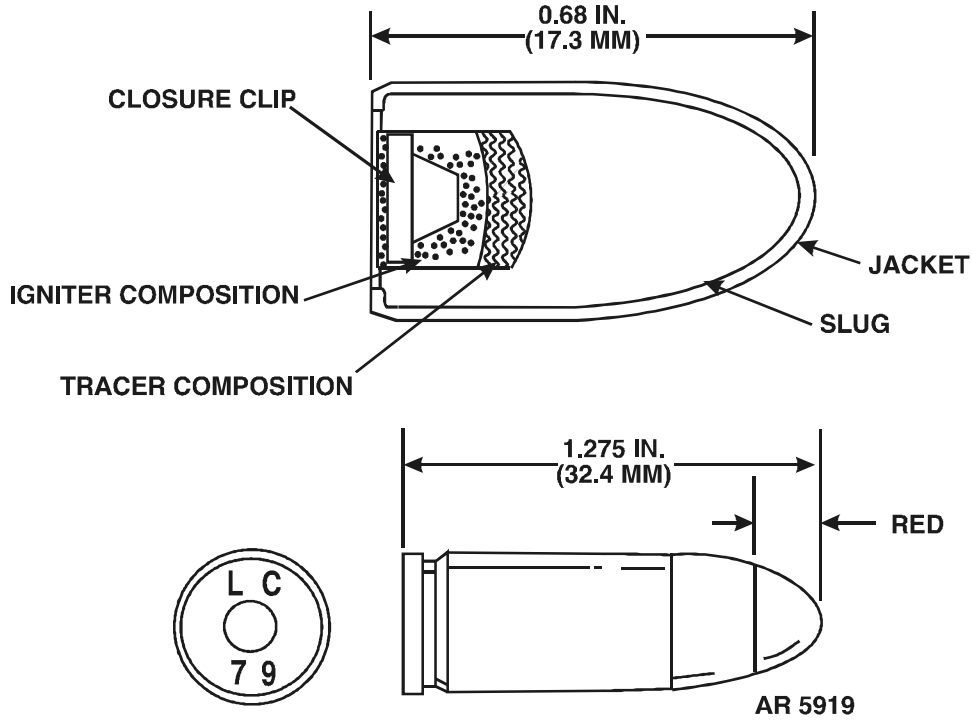
Quantity-distance class/SCG	1.4S
Storage code	Class V
DOT shipping class	C
DOT designation	SMALL ARMS AMMUNITION
Drawing number	10523805

References:

- SB 700-20
- TM 9-1005-211-12
- AR 385-64
- DA Pam 385-64

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CARTRIDGE, CALIBER .45, TRACER, M26



Type Classification:

CON - MSR 11756003.

Use:

Submachine Gun, Caliber .45, M3A1; and Pistol, Caliber .45, M1911A1. The tracer is intended to permit observation of the bullet's in-flight path or trajectory to the point of impact.

Description:

TRACER Cartridge. The cartridge is identified by a red bullet tip.

Tabulated Data:

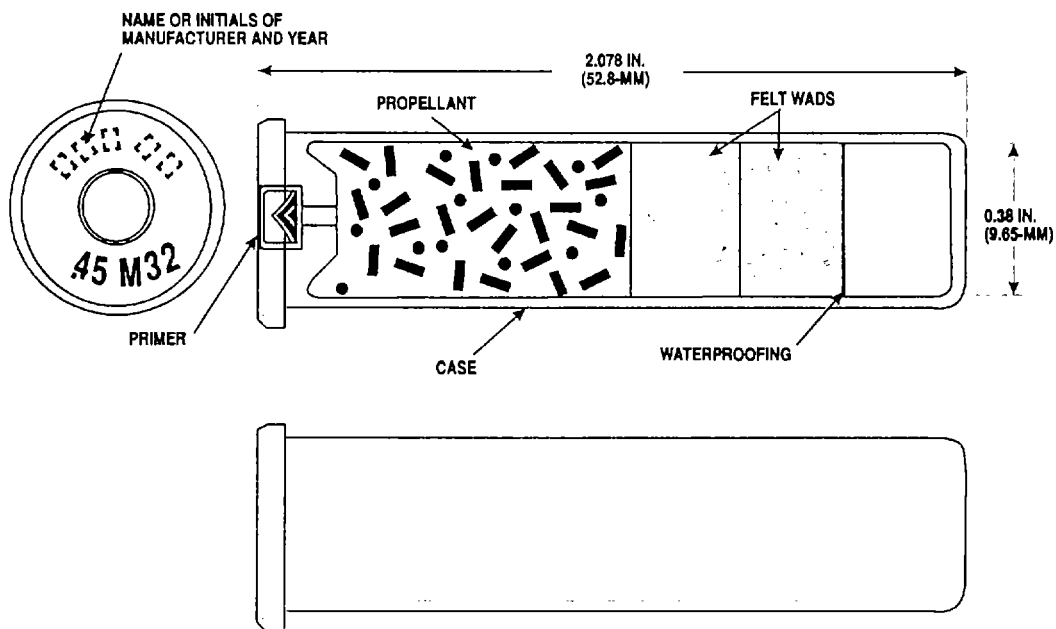
DODAC 1305-A479
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile

Weight	331 gr
Length	1.275 in. (32.4 mm)
Tracer	R256
Primer.....	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	SR 7970
Weight	6 gr
Projectile:	
Weight	208 gr

Performance:

Chamber pressure	19,000 psi
Velocity	885 fps, 25.5 ft from muzzle

CARTRIDGE, CALIBER .45, LINE THROWING, M32



U
AR 5920

Type Classification:

STD A - OTCM 36841.

Use:

Line Throwing Gun, Caliber .45/.70.

Description:

LINE THROWING Cartridge. The cartridge is composed of a brass case, primer, commercial smokeless powder; and two felt wads coated on both sides with gummed paper. The wads are sealed with red lacquer. The cartridge case mouth is crimped to prevent entry of the line throwing rod.

Function:

The line throwing rod is placed in the weapon barrel. Cartridge initiation provides pressure to force the rod out of the barrel and propel the line to the target.

Tabulated Data:

DODAC -----1305-A477
 UNO serial number-----0014

UNO proper shipping

name-----	Cartridges for weapons, blank
Weight-----	192 gr
Length-----	2.078 in. (52.8 mm)
Tracer-----	NA
Primer-----	Percussion
Fuze-----	NA
Explosive:	
Type-----	NA
Weight-----	NA
Incendiary:	
Type-----	NA
Weight-----	NA
Propellant:	
Type-----	Smokeless powder
Weight-----	MBR

Performance:

Chamber pressure-----	20,000 psi
Velocity-----	NA

Shipping and Storage Data:

Quantity-distance class/ SCG-----	1.4S
Storage code-----	Class V

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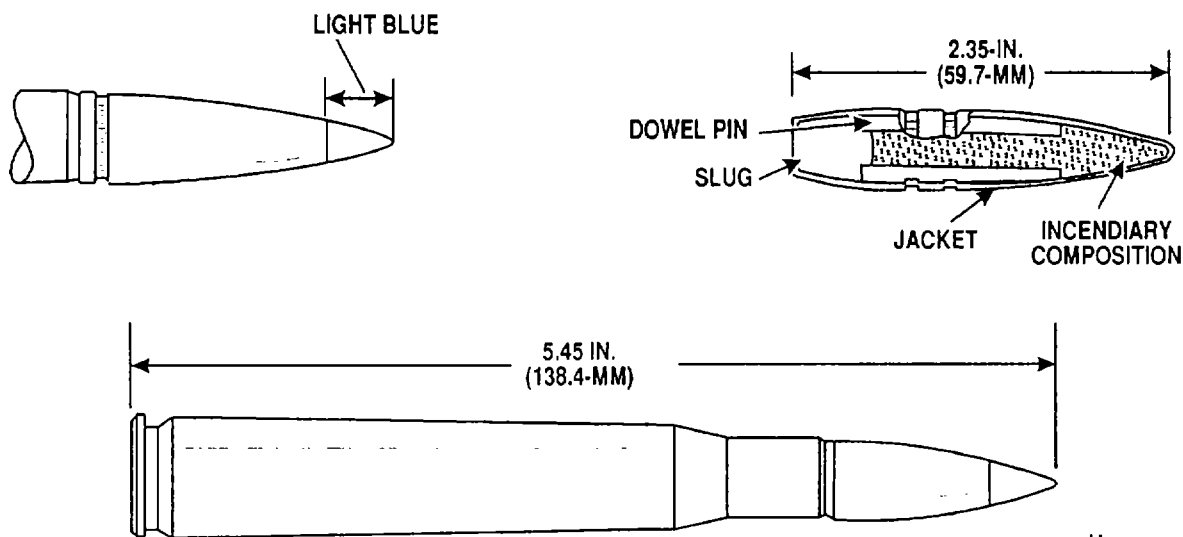
CHAPTER 9
CALIBER .50 CARTRIDGES

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CARTRIDGE, CALIBER .50, INCENDIARY, M1



U
AR 5927

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .50, M2 and M85.

Description:

INCENDIARY Cartridge. The cartridge is identified by a blue bullet tip.

Function:

Upon impact with a hardened or armored target, the incendiary composition bursts into flame and will ignite any flammable material.

Tabulated Data:

DODAC -----1305-A562
 UNO serial number-----0300
 UNO proper shipping
 name -----Ammunition,
 incendiary
 Weight-----1744 gr
 Length -----5.45 in, (138.4 mm)
 Tracer-----NA
 Primer -----Percussion
 Fuze-----NA

Explosive:

Type ----- NA
 Weight----- NA

Incendiary:

Type ----- IM 11
 Weight----- 34 gr

Propellant:

Type ----- WC 860
 Weight----- 240 gr

Performance:

Chamber pressure----- 54,000 psi
 Velocity----- 2950 fps, 78 ft from
 muzzle

Shipping and Storage Data:

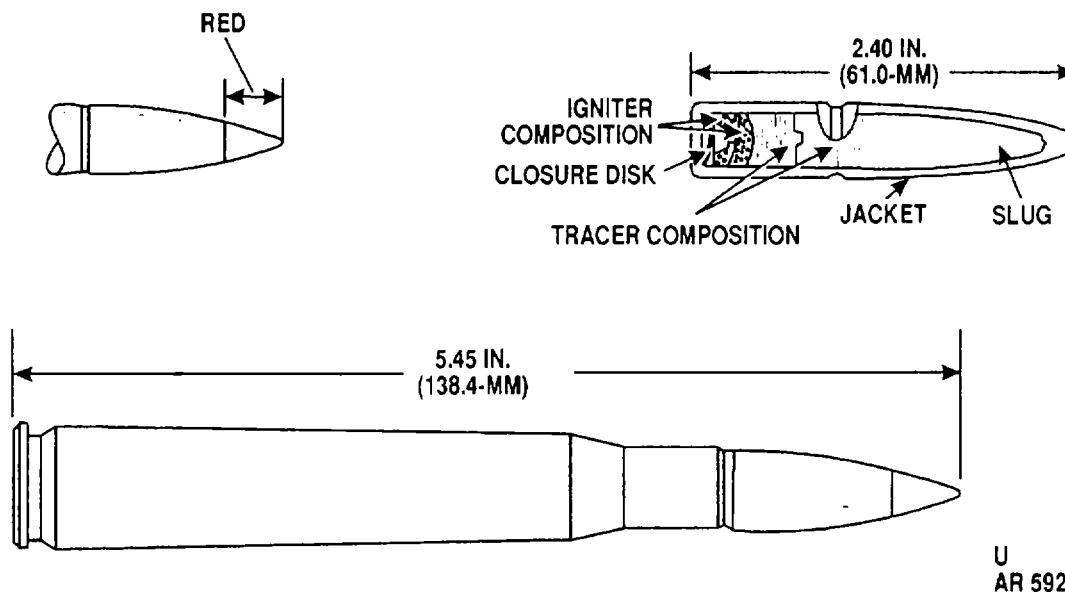
Quantity-distance class/
 SCG----- 1.4C
 Storage code----- Class V
 DOT shipping class----- C
 DOT designation ----- SMALL ARMS
 AMMUNITION
 Drawing number----- 5579812

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, TRACER, M1



Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .50, M2 and M85. The tracer is intended to permit visible observation of the bullet's in-flight path or trajectory to the point of impact. Limited to CONUS for training purposes only.

Description:

TRACER Cartridge. The cartridge is identified by a red bullet tip.

Tabulated Data:

DODAC ----- 1305-A591
 UNO serial number-----0362
 UNO proper shipping
 name -----Ammunition, practice
 Weight----- 1785 gr
 Length -----5.45 in. (138.4 mm)
 Tracer-----R256
 Primer -----Percussion
 Fuze-----NA

Explosive:

Type ----- NA
 Weight----- NA

Incendiary:

Type ----- NA
 Weight----- NA

Propellant:

Type ----- IMR 5010
 Weight----- 240 gr

Performance:

Chamber pressure----- 52,000 psi
 Velocity----- 2700 fps, 78 ft from
 muzzle

Shipping and Storage Data:

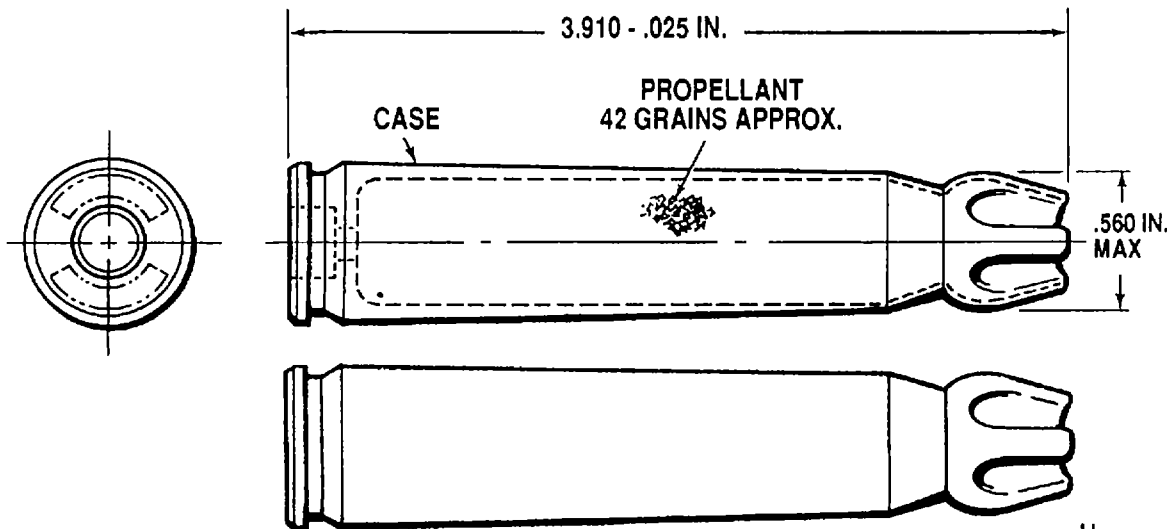
Quantity-distance class/
 SCG----- 1.4C
 Storage code----- Class V
 DOT shipping class----- C
 DOT designation ----- SMALL ARMS
 AMMUNITION
 Drawing number----- 5544843

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, BLANK, M1A1



U
AR 5929

Type Classification:

STD - MSR 02806015.

Use:

Machine Gun, Caliber .50, M2 with the M19 Blank Ammunition Firing Attachment; and Machine Gun, Caliber .50, M85 with the M20 Blank Firing Attachment. The cartridge is used to simulate firing in training exercises.

Description:

BLANK Cartridge. The cartridge is identified by the absence of a bullet. The M1A1 differs from the M1 in that the M1A1 has a rosette crimp at the mouth. Also, the M1A1 is loaded with Dupont Hi Skor 700X propellant.

Tabulated Data:

DODAC -----1305-A559
 UNO serial number-----0338
 UNO proper shipping
 name -----Cartridges for
 weapons, blank
 Weight-----915 to 955 gr
 Length -----3.91 in. (99.3 mm)
 Tracer-----NA
 Primer -----Percussion

Fuze----- NA
 Explosive:
 Type ----- NA
 Weight----- NA
 Incendiary:
 Type ----- NA
 Weight----- NA
 Propellant:
 Type ----- Dupont Hi Skor
 700X
 Weight----- 42 gr

Performance:

Chamber pressure----- NA
 Velocity----- NA

Shipping and Storage Data:

Quantity-distance class/
 SCG----- 1.4S
 Storage code----- Class V
 DOT shipping class----- C
 DOT designation ----- SMALL ARMS
 AMMUNITION
 Drawing number----- 9341551

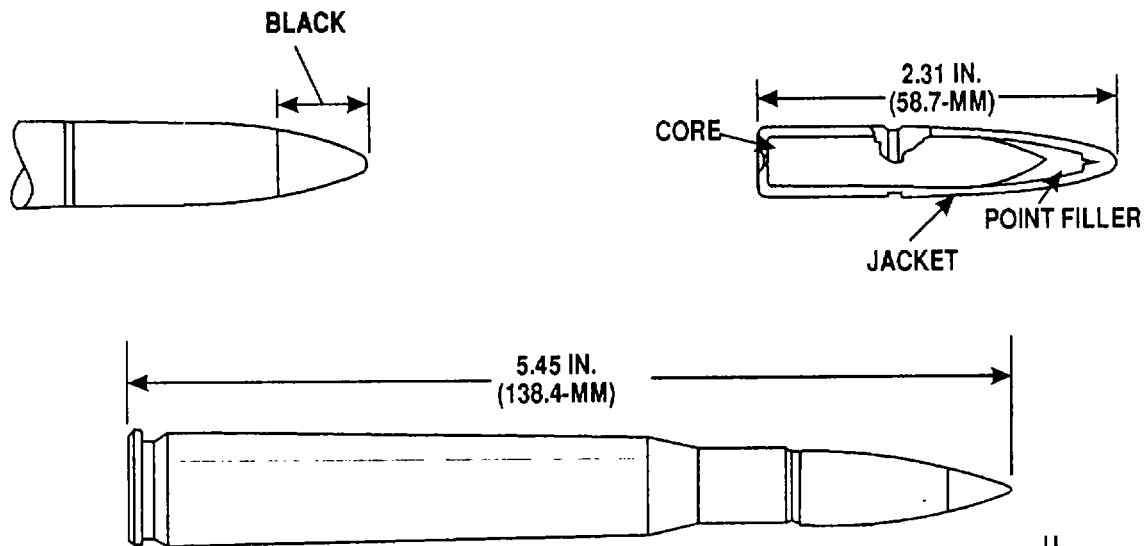
References:

DARCOM 700-3-2

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CARTRIDGE, CALIBER .50, BALL, ARMOR PIERCING, M2



U
AR 5930

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge is for use against light-armored or unarmored targets, concrete shelters, and similar bullet-resisting targets.

Description:

BALL Cartridge. The cartridge is identified by a black bullet tip.

Tabulated Data:

DODAC..... 1305-A526
 UNO serial number 0339
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight 1812 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer NA
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type WC 860
 Weight 235 gr

Performance:

Chamber pressure..... 53,000 psi
 Velocity 2810 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 5569930

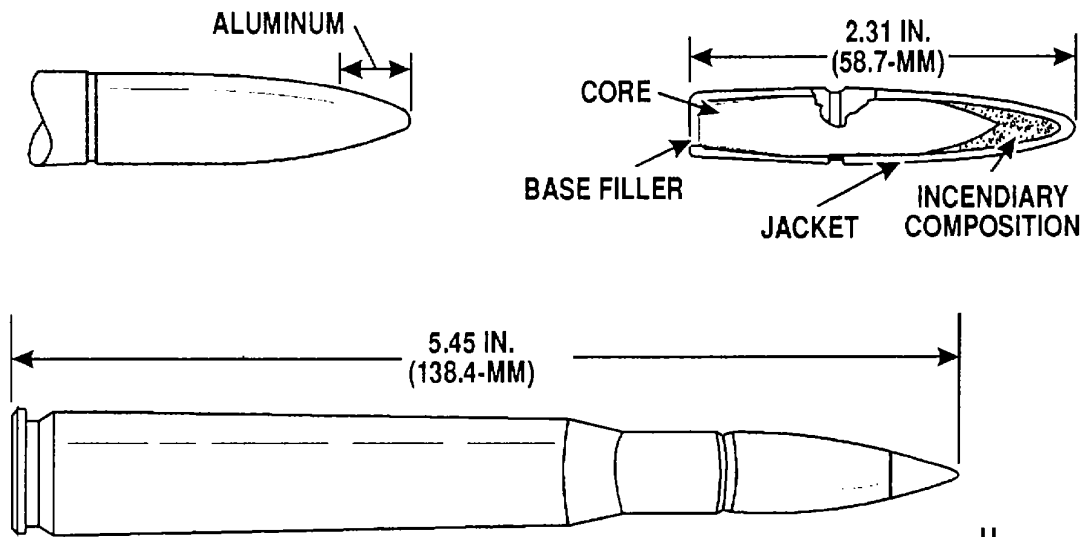
References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM9-1300-206

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CARTRIDGE, CALIBER .50, BALL, ARMOR PIERCING INCENDIARY, M8



**U
AR 5933**

Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge combines the functions of the M2 armor piercing bullet and the incendiary bullet, and is used against flammable targets and light-armored or unarmored targets, concrete shelters, and similar bullet-resisting targets.

Description:

BALL Cartridge. The cartridge is identified by an aluminum bullet tip.

Tabulated Data:

DODAC..... 1305-A531
 UNO serial number 0300
 UNO proper shipping
 name Ammunition,
 incendiary
 Weight 1764 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer NA
 Primer..... Percussion
 Fuze NA
 Explosive:
 Type NA

Weight..... NA
 Incendiary:
 Type IM 11
 Weight 15 gr
 Propellant:
 Type WC 860
 Weight..... 233 gr
 Projectile:
 Weight..... 622.5 gr

Performance:

Chamber pressure..... 59,000 psi
 Velocity 2910 fps, 78 ft from
 muzzle

Shipping and Storage Data:

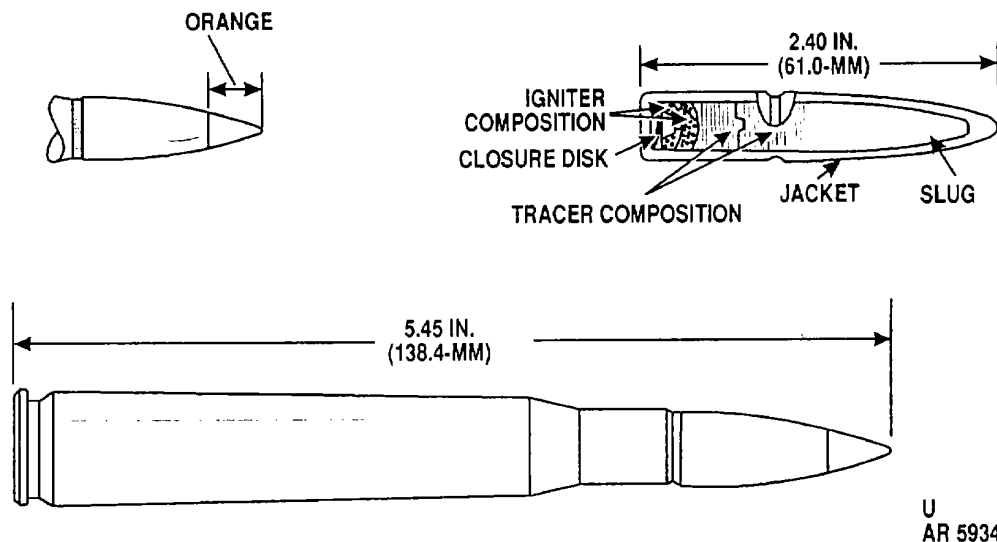
Quantity-distance class/
 SCG..... 1.4G
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number 7970238

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, TRACER, M10



Type Classification:

STD - OTCM 37107.

Use:

Machine Guns, Caliber .50, M2 and M85.

Description:

TRACER Cartridge. The cartridge is identified by an orange bullet tip.

Function:

The tracer cartridge exhibits a visible trace from a point not greater than 100 yards from the muzzle of the weapon to a point not less than 1,600 yards from the muzzle.

Tabulated Data:

DODAC..... 1305-A570
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 1752 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer R256
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type IMR 5010
 Weight..... 240 gr

Performance:

Chamber pressure..... 54,000 psi
 Velocity..... 2860 fps, 78 ft from muzzle

Shipping and Storage Data:

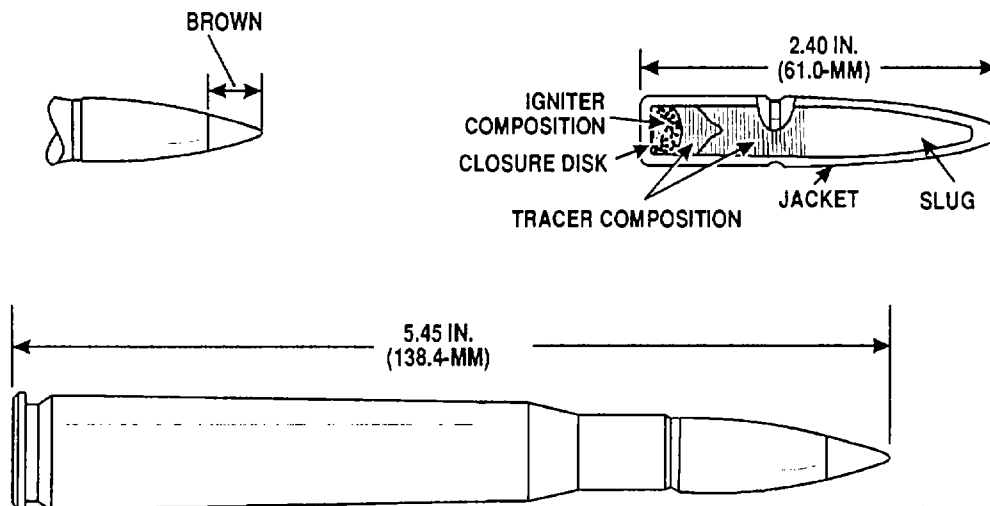
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7670296

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, TRACER, M17



U
AR 5935

Type Classification:

CON - MSR 11756003.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge tracer is intended to permit visible observation of the bullets in-flight path or trajectory to the point of impact.

Description:

TRACER Cartridge. The cartridge is identified by a brown bullet tip.

Tabulated Data:

DODAC..... 1305-A571
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 1732 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer R256
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type IMR 5010
 Weight..... 225 gr

Performance:

Chamber pressure..... 54,000 psi
 Velocity..... 2860 fps, 78 ft from muzzle

Shipping and Storage Data:

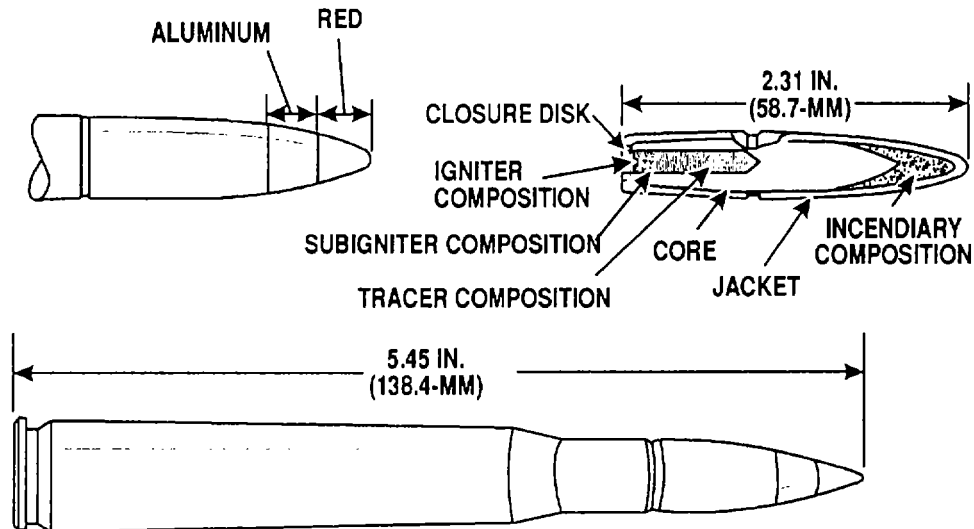
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7672165

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, BALL, ARMOR PIERCING INCENDIARY-TRACER, M20



U
AR 5936

Type Classification:

OBS - MSR 04776009.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge combines the functions of the armor piercing and the incendiary bullet, and is used against flammable targets and light-armored or unarmored targets, concrete shelters, and similar bullet-resisting targets.

Description:

BALL Cartridge. The cartridge is identified by a red bullet tip with an aluminum colored ring to the rear of the red tip.

Tabulated Data:

DODAC..... 1305-A542
 UNO serial number 0300
 UNO proper shipping name Ammunition, incendiary
 Weight 1718 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer R256
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type IM 161
 Weight..... 27 gr

Propellant:

Type IMR 5010
 Weight..... 230 gr

Projectile:

Weight..... 619 gr

Performance:

Chamber pressure..... 55,000 psi
 Velocity..... 2910 fps, 78 ft from muzzle

Shipping and Storage Data:

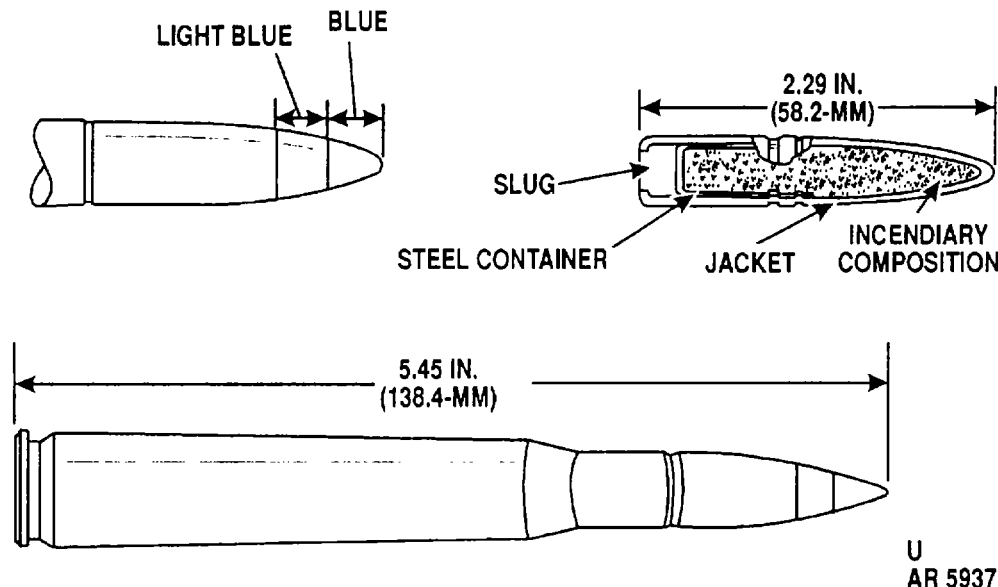
Quantity-distance class/
 SCG..... 1.4G
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7672003

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, INCENDIARY, M23



Type Classification:

STD - OTCM 36841.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge is used against flammable targets.

Description:

INCENDIARY Cartridge. The cartridge is identified by a blue bullet tip with a light blue ring to the rear of the blue tip.

Purpose:

The cartridge is capable of initiating combustion of flammable materials upon target impact at 175 yards.

Tabulated Data:

DODAC..... 1305-A563
 UNO serial number 0300
 UNO proper shipping name Ammunition, incendiary
 Weight 1581 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer NA
 Primer----- Percussion

Fuze NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type IM 28
 Weight..... 90 gr
 Propellant:
 Type IMR 4831
 Weight..... 237 gr
 Performance:
 Chamber pressure..... 58,000 psi
 Velocity..... 3400 fps, 78 ft from muzzle

Shipping and Storage Data:

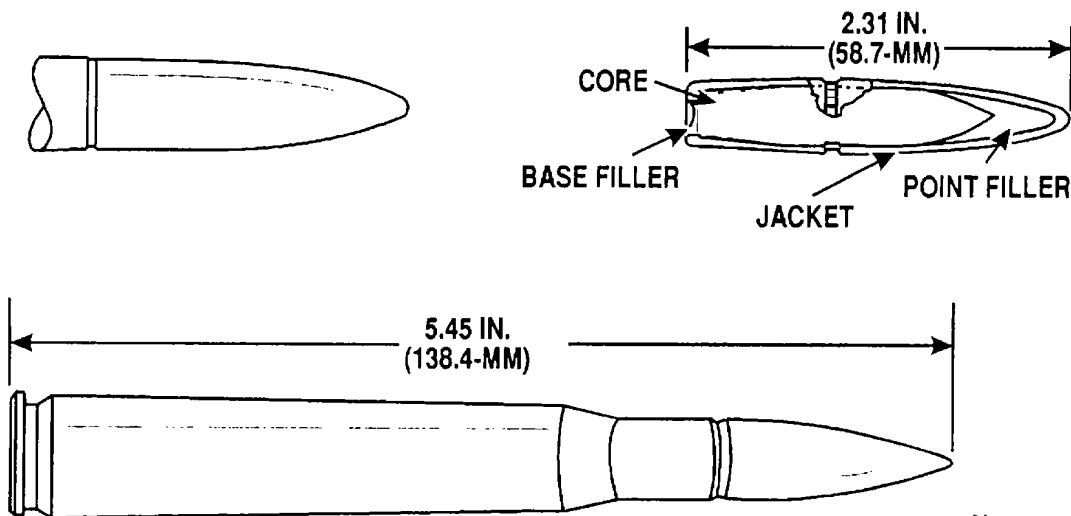
Quantity-distance class/
 SCG..... 1.4G
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7673512

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, BALL, M33



U
AR 5938

Type Classification:

STD - OTCM 36841.

Use:

Machine Guns, Caliber .50, M2 and M85. The cartridge is intended for use against personnel or unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by a plain bullet tip.

Tabulated Data:

DODAC..... 1305-A552
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 1762 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer NA
 Primer..... Percussion
 Fuze NA
 Explosive:
 Type NA

Weight..... NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type WC 860
 Weight..... 235 gr

Performance:

Chamber pressure..... 55,000 psi
 Velocity..... 2910 fps, 78 ft from muzzle

Shipping and Storage Data:

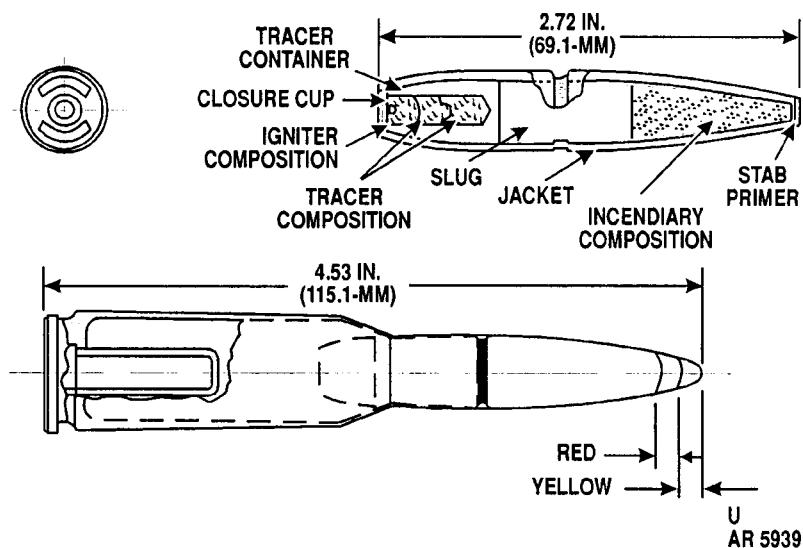
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7553097

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, BALL, SPOTTER-TRACER, M48A1



Type Classification:

STD - AMCTC 7378.

Use:

Rifle, Spotting, Caliber .50, M8C.

Description:

BALL Cartridge. The cartridge has specific features which aid in identification. The cartridge case has a distinctive body design which prevents chambering in other weapons. The total length is only 4.5 inches in comparison with 5.5 inches for a standard round. The bullet has a yellow tip with a red ring to the rear of the yellow tip.

Function:

In flight, the bullet exhibits a visible trace from a point not greater than 100 yards from the muzzle of the weapon to a point not less than 1,500 yards from the muzzle. The bullet will detonate and produce a flash and a puff of smoke upon impact against a steel plate placed at 175 yards from the muzzle of the weapon at all angles from 90° to 11° with respect to the horizontal.

Difference Between Models:

The M48A1 differs from the M48A2 in that the M48A1 has a primer in the point of the bullet.

Tabulated Data:

DODAC.....	1305-A574
UNO serial number	0339
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	1744 gr
Length.....	4.53 in. (115.1 mm)
Tracer	R321
Primer.....	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA Incendiary:
Type	IM 144
Weight.....	32 gr
Propellant:	
Type	IMR 7383
Weight.....	110 gr

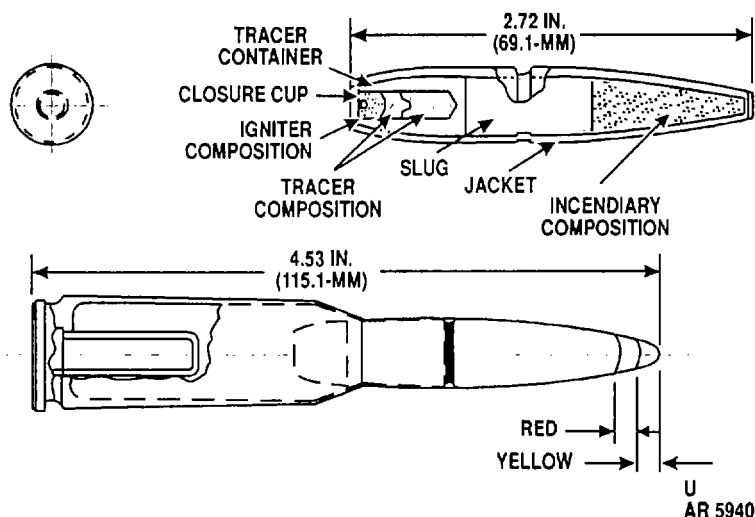
Performance:

Chamber pressure.....	38,000 psi
Velocity	1745 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG.....	1.4C
Storage code.....	Class V

CARTRIDGE, CALIBER .50, BALL, SPOTTER-TRACER, M48A2



Type Classification:

STD - AMCTC 7378.

Use:

Rifle, Spotting, Caliber .50, M8C.

Description:

BALL Cartridge. The cartridge has specific features which aid in identification. The cartridge case has a distinctive body design which prevents chambering in other weapons. The total length is only 4.5 inches in comparison with 5.5 inches for a standard round. The bullet has a yellow tip with a red ring to the rear of the yellow tip.

Function:

In flight, the bullet exhibits a visible trace from a point not greater than 100 yards from the muzzle of the weapon to a point not less than 1,500 yards from the muzzle. The bullet will detonate and produce a flash and a puff of smoke upon impact against a steel plate placed at 175 yards from the muzzle of the weapon at all angles from 90° to 11° with respect to the horizontal.

Difference Between Models:

The M48A2 differs from the M48A1 in that the M48A2 does not have a primer in the point of the bullet.

Tabulated Data:

DODAC.....	1305-A574
UNO serial number	0339
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	1744 gr
Length.....	4.53 in. (115.1 mm)
Tracer	R321
Primer.....	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight.....	NA
Incendiary:	
Type	IM 144
Weight.....	32 gr
Propellant:	
Type	IMR 7383
Weight.....	110 gr
Projectile:	
Weight.....	833 gr

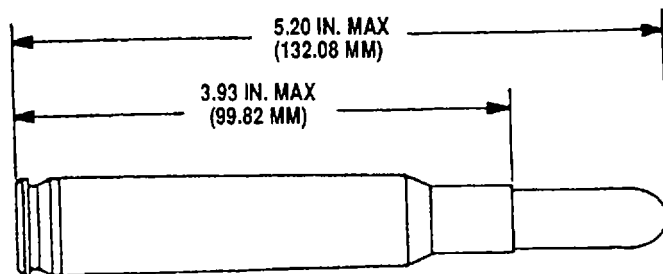
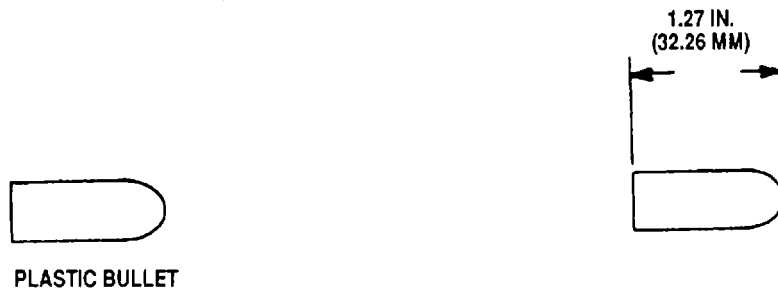
Performance:

Chamber pressure.....	38,000 psi
Velocity	1745 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG.....	1.4C
Storage code.....	Class V

CARTRIDGE, CALIBER .50, BALL, PLASTIC PRACTICE, M858



U
AR 5943

Type Classification:

STD - dated 24 May 1983.

Use:

Machine Gun, Caliber .50, with the M3 Recoil Amplifier. The cartridge is intended for scaled range training purposes.

Description:

BALL Cartridge. The cartridge is identified by the blue bullet and case which are molded into one piece with high density polyethylene plastic.

Tabulated Data:

DODAC..... 1305-A603
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 460 gr
 Length..... 5.2 in. (132.08 mm)
 Tracer NA
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type 10B101
 Weight..... 49 gr

Performance:

Chamber pressure..... 26,100 psi
 Velocity..... 2790 fps, 78 ft from muzzle

Maximum range 700 m

Shipping and Storage Data:

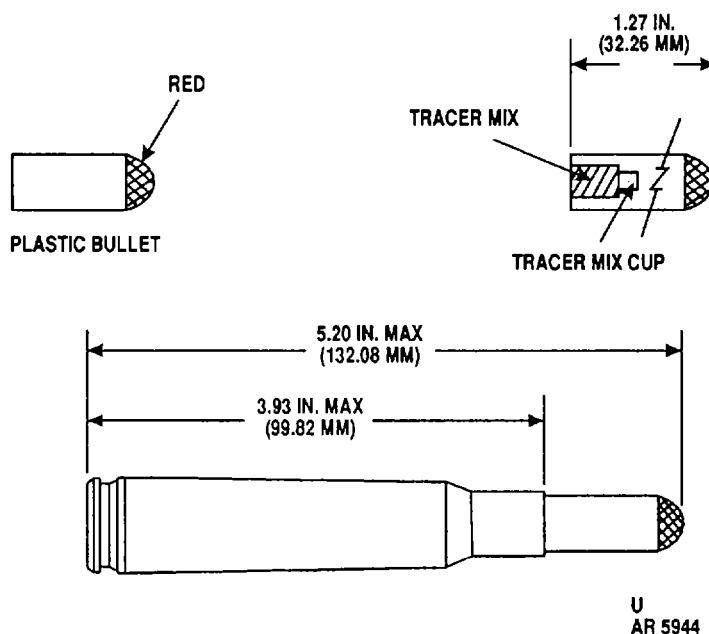
Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class S
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 9340557

References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, TRACER, PLASTIC PRACTICE, M860



Type Classification:

STD - dated 24 May 1983.

Use:

Machine Gun, Caliber .50, M2 with the M3 Recoil Amplifier. The cartridge tracer is intended for scaled range training to permit visible observation of the bullet's in-flight path or trajectory to the point of impact. The cartridge is intended for use with the M858 Plastic Practice Ball Cartridge.

Description:

TRACER Cartridge. The cartridge is identified by a red bullet tip and the blue bullet and case which are molded into one piece with high density polyethylene plastic.

Tabulated Data:

DODAC..... 1305-A595
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 460 gr
 Length..... 5.2 in. (132.08 mm)
 Tracer DAG9591254/4
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type 10B101
 Weight..... 49 gr

Performance:

Chamber pressure..... 26,100 psi
 Velocity 2790 fps, 78 ft from muzzle
 Maximum range 700 m
 Trace 20-150 m

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.4S
 Storage code..... Class S
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 9340558

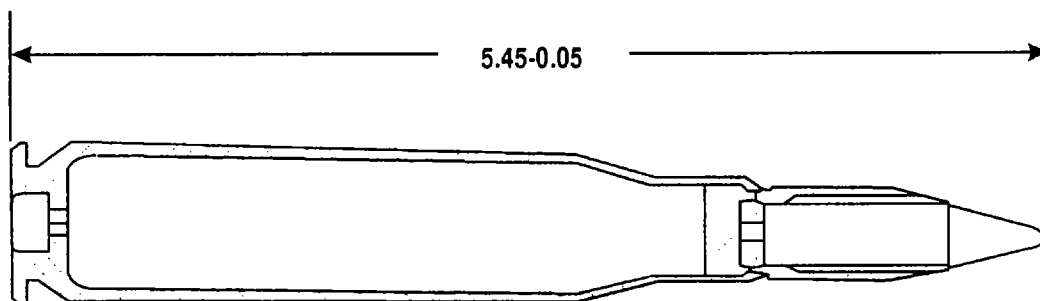
References:

SB 700-20
 TM 9-1005-213-10
 TM 9-1005-231-10
 TM 9-1300-206

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**CARTRIDGE, CALIBER .50, SABOTED LIGHT ARMOR
PENETRATOR-TRACER (SLAP-T), M962**



U
AR 6024

Type Classification:

STD - 31 March 1993.

Use:

Machine Gun, Caliber .50, M2HB. The cartridge is to be used by soldiers equipped with M2 machine guns.

Description:

COMBAT Cartridge. The cartridge is identified by a red sabot (Ultem 1000).

Tabulated Data:

DODAC..... 1305-A518
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 1466 gr
 Length..... 5.45 in. (138.4 mm)
 Tracer R543
 Primer..... Percussion
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type WC 856
 Weight..... 282 gr

Projectile:

Weight..... 350-360 gr

Performance:

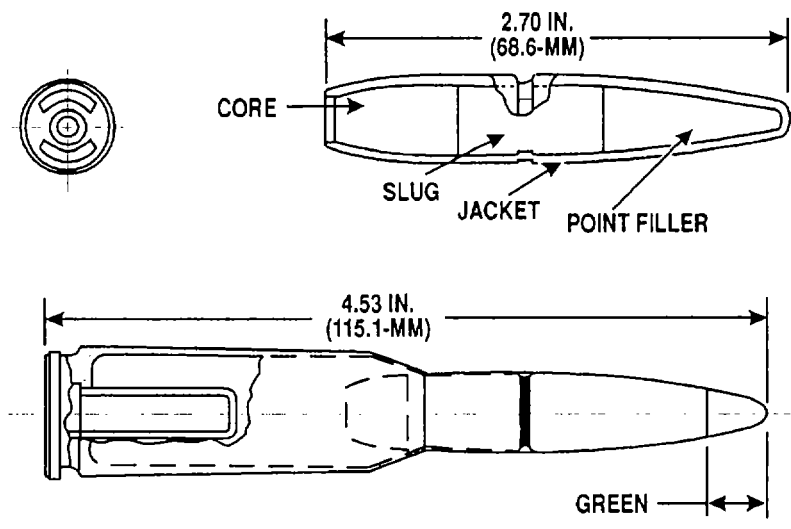
Chamber pressure..... 55,000 psi
 Velocity 4000 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/SCG..... 1.4
 Storage code..... C
 DOT shipping class C
 DOT designation CARTRIDGES
 SMALL ARMS
 UN0339

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CARTRIDGE, CALIBER .50, BALL, PRACTICE, T249E2



U
AR 5941

Type Classification:

Not applicable.

Use:

Rifle, Spotting, Caliber .50, M8C. The cartridge is used as a less expensive substitute for the M48 series spotter-tracer cartridges. The item uses a small amount of Sodium Carbonate Monohydrate as its spotting charge. It is similar to using a flour bag as a bomb.

Description:

BALL Cartridge. The cartridge is a duplicate of the M48 series cartridges, a less expensive model used for practice. It is identified by a green bullet tip. It has no tracer or incendiary filler.

Tabulated Data:

DODAC..... 1305-A579
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 1738 gr
 Length..... 4.53 in. (115.1 mm)
 Tracer NA
 Primer..... Percussion

Fuze NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type IMR 7383
 Weight..... 110 gr
 Projectile:
 Weight..... 817 gr

Performance:

Chamber pressure..... 38,000 psi
 Velocity..... 1745 fps, 78 ft from muzzle

Shipping and Storage Data:

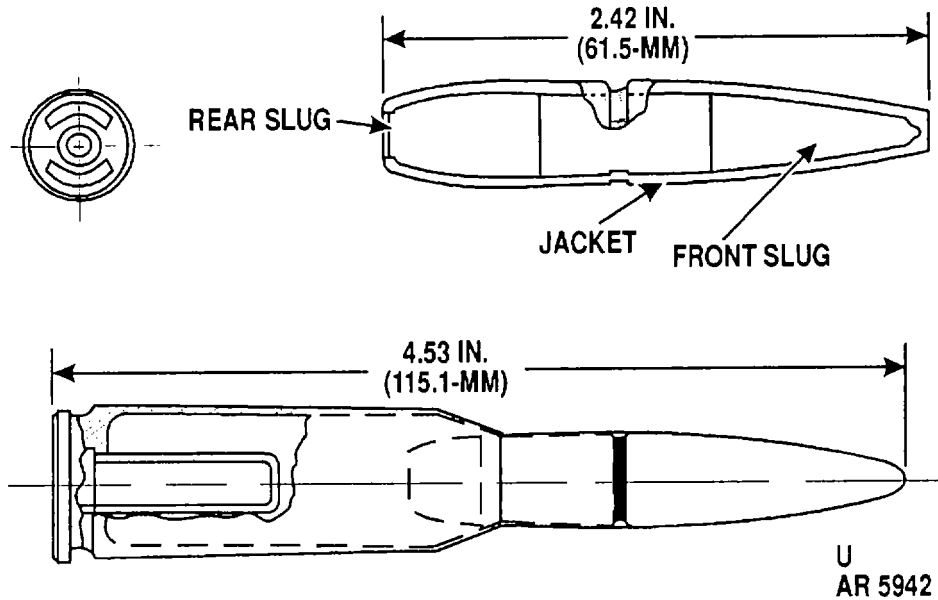
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 10534667

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, CALIBER .50, BALL, HIGH PRESSURE TEST, T251



Type Classification:
Not applicable.

Use:

Rifle, Spotting, Caliber .50, M8C. The cartridge is used in proof testing the caliber .50 M8C Spotting Rifle during manufacture, test, or repair.

Description:

BALL Cartridge. The cartridge is standard small caliber and is identified by a stannic-stained (silvered) cartridge case.

Tabulated Data:

DODAC..... 1305-A578
 UNO serial number 0339
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight 1902 gr
 Length..... 4.53 in. (115.1 mm)
 Tracer NA
 Primer..... Percussion

Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 TypeNA
 WeightNA
 Propellant:
 Type.....IMR 4831
 Weight 142 gr

Performance:

Chamber pressure..... 55,000 psi
 Velocity NA
 Shipping and Storage Data:
 Quantity-distance class/
 SCG 1.4C
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 10534770

References:

SB 700-20
 TM 9-1300-206

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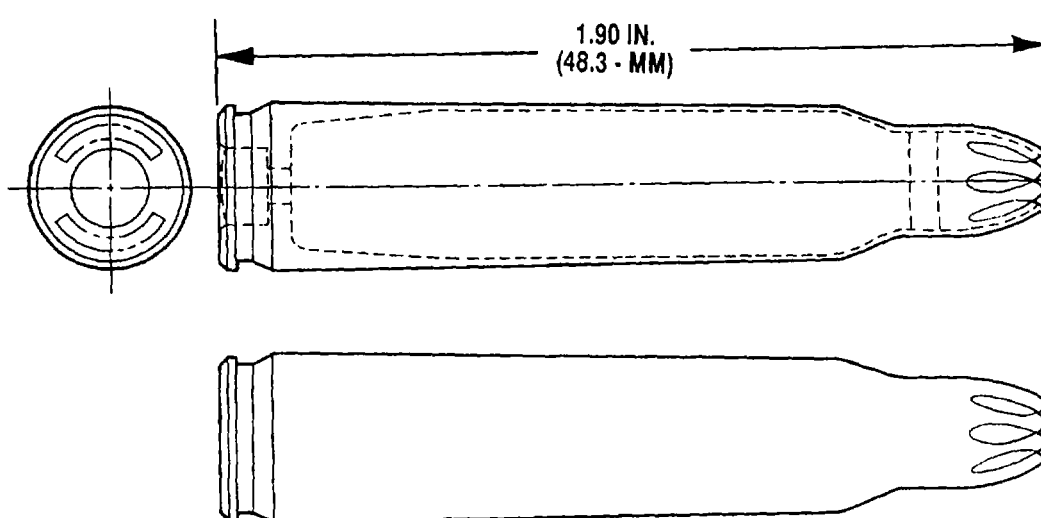
Change 2 9-48

CHAPTER 10
5.56MM CARTRIDGES

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CARTRIDGE, 5.56MM, GRENADE, M195



U
AR 5947

Type Classification:

STD - AMCTC 6919.

Use:

Rifles, 5.56mm, M16 and M16A1.

Description:

GRENADE Cartridge. The cartridge is identified by a rose-petal (rosette-crimp) closure of the cartridge case mouth sealed with red lacquer.

Function:

The cartridge provides pressure, on functioning, to project grenades to a desired target using a grenade projection adapter.

Tabulated Data:

DODAC.....1330-G841
 UNO serial number0014
 UNO proper shipping
 nameCartridges for
 weapons, blank

Weight126 gr
 Length.....1.9 in. (48.3 mm)
 TracerNA
 PrimerPercussion
 Fuze.....NA
 Explosive:
 TypeNA
 WeightNA
 Incendiary:
 TypeNA
 WeightNA
 Propellant:
 TypeIMR 4475
 Weight25 gr

Performance:

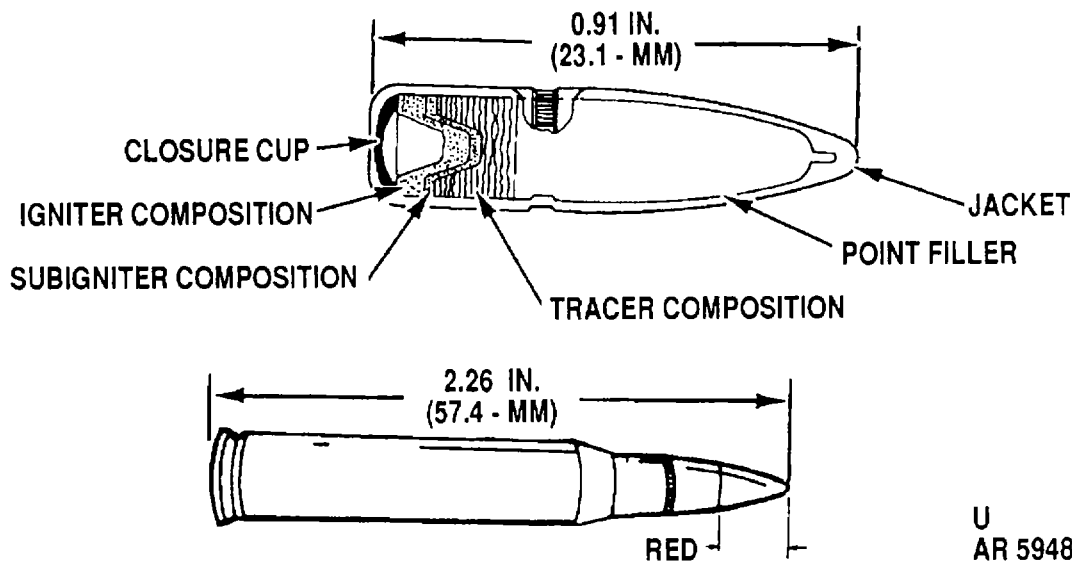
Chamber pressureNA
 Velocity140 to 165 fps, 5 ft
 6 in. from muzzle
 for projected gre-
 nade

Shipping and Storage Data:

Quantity-distance class/
 SCG1.4S
 Storage code `Class V

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CARTRIDGE, 5.56MM, TRACER, M196



Type Classification:

STD - AMCTC 5055.

Use:

Rifles, 5.56mm, M16 and M16A1. The tracer is intended to permit visible observation of the bullet's in-flight path or trajectory to the point of impact.

Description:

TRACER Cartridge. The cartridge is identified by a red bullet tip.

Tabulated Data:

DODAC.....1305-A068
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile
 Weight177 gr
 Length..... 2.26 in. (57.4 mm)
 TracerR284
 PrimerPercussion
 FuzeNA
 Explosive:
 TypeNA
 WeightNA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeWC 844 or IMR 8208M
 Weight 28.5 gr, 25.3 gr or CMR 170, 26.5 gr

Projectile:

Weight54 gr

Performance:

Chamber pressure 52,000 psi
 Velocity.....3200 fps, 15 ft from muzzle

Shipping and Storage Data:

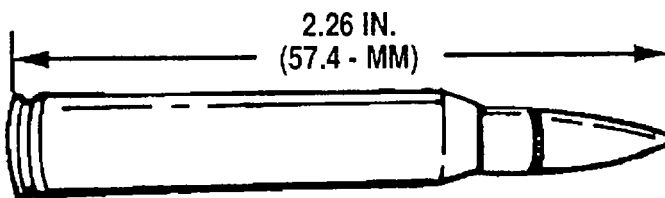
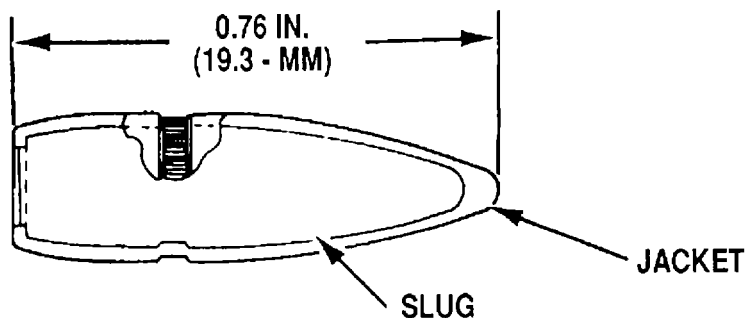
Quantity-distance class/
 SCG1.4S
 Storage codeClass V
 DOT shipping class.....C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number.....10534193

References:

SB 700-20
 TM 9-1005-249-10
 TM 9-1300-206

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CARTRIDGE, 5.56MM, HIGH PRESSURE TEST, M197



U
AR 5950

Type Classification:

STD - AMCTC 4484.

Use:

Rifles, 5.56mm, M16 and M16A1. The cartridge is used to proof test weapons during manufacture, test, or repair.

Description:

HIGH PRESSURE TEST Cartridge. The cartridge is identified by a stannic-stained (silvered) or nickel-plated cartridge case.

Function:

The cartridge is loaded with a special propellant to produce pressures substantially in excess of the service round.

Tabulated Data:

DODAC.....1305-A070
UNO serial number0012

UNO proper shipping

nameCartridges for
weapons, inert pro-
jectile

Weight174 gr
Length..... 2.26 in. (57.4 mm)
TracerNA
Primer.....Percussion
Fuze.....NA
Explosive:
TypeNA
WeightNA
Incendiary:
TypeNA
Weight.....NA
Propellant:
TypeSR 7641
Weight-.....16.7 gr
Projectile:
Weight.....56 gr

Performance:

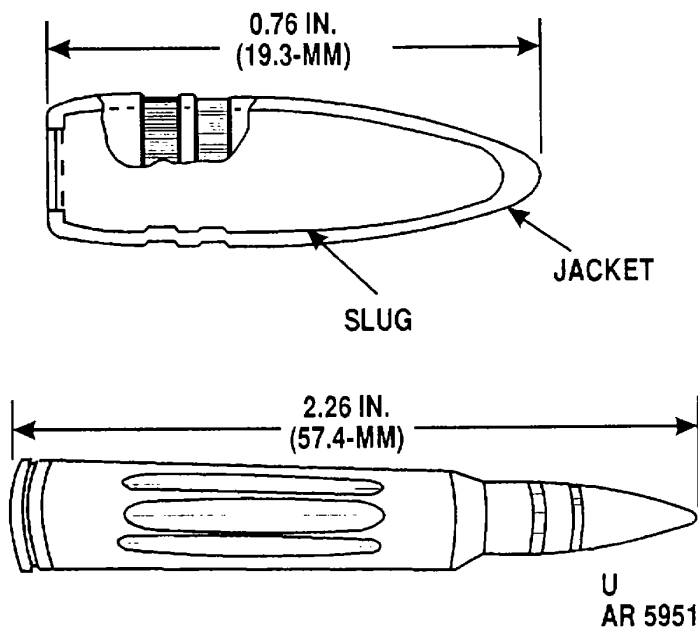
Chamber pressure.....70,000 psi
VelocityNA

Shipping and Storage Data:

Quantity-distance class/
SCG1.4S
Storage code.....Class V

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CARTRIDGE, DUMMY, 5.56MM, M199



Type Classification:

STD - AMCTC 4662.

Use:

Rifles, 5.56mm, M16 and M16A1. The cartridge is used for practice in loading 5.56mm weapons, for simulated firing to detect flinching of personnel when firing, and for inspecting and testing the weapon mechanisms.

Description:

DUMMY Cartridge. The cartridge is identified by six longitudinal corrugations (flutings) in the cartridge case and there is no primer.

Tabulated Data:

DODAC.....1305-A060
 Weight150 gr
 Length.....2.26 in. (57.4 mm)
 TracerNA
 Primer.....NA
 Fuze.....NA
 Explosive:
 TypeNA
 Weight.....NA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeNA
 Weight.....NA

Performance:

Chamber pressure.....NA
 VelocityNA

Shipping and Storage Data:

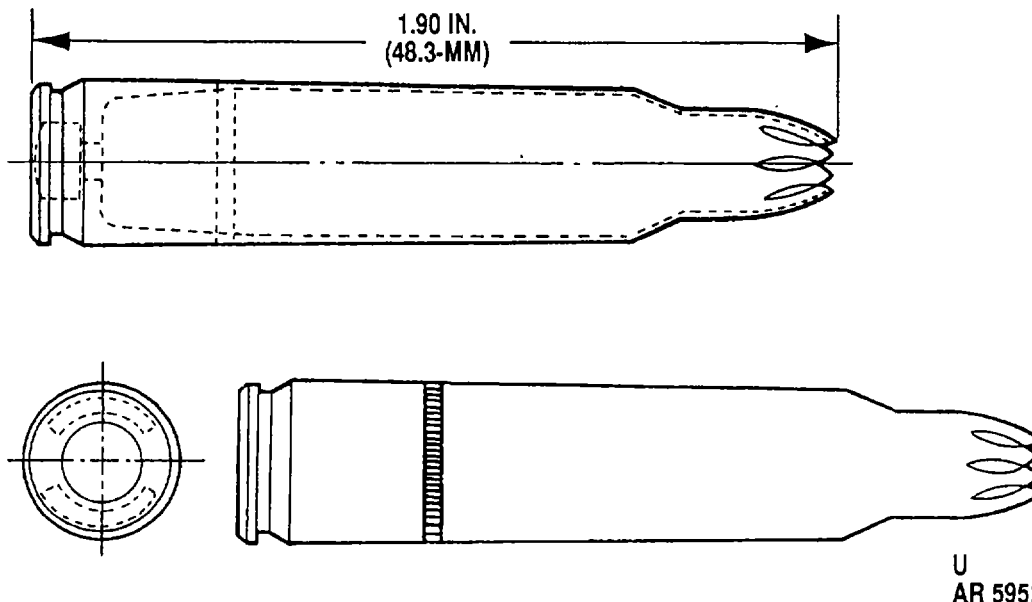
Quantity-distance class/
 SCGNA
 Storage codeNA
 DOT shipping classNA
 DOT designationNONEXPLOSIVE
 AMMUNITION
 Drawing number.....10534021

References:

SB 700-20
 TM 9-1005-249-10
 TM 9-1300-206

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CARTRIDGE, 5.56MM, BLANK, M200



U
AR 5952

Type Classification:

STD - AMCTC 5942.

Use:

Rifles, 5.56mm, M16 and M16A1. The cartridge is designed for simulated firing in training exercises and for saluting purposes.

Description:

BLANK Cartridge. The cartridge is identified by a rose-petal (rosette-crimp) closure of the cartridge case mouth. An engraved knurl is located 1/2 inch from the head of the cartridge case.

Tabulated Data:

DODAC.....1305-A080
 UNO serial number0014
 UNO proper shipping
 nameCartridges for
 weapons, blank
 Weight107 gr
 Length.....1.9 in. (48.3 mm)
 TracerNA
 Primer.....Percussion
 Fuze.....NA

Explosive:

TypeNA
 Weight.....NA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeHPC 13
 Weight.....7 gr

Performance:

Chamber pressure.....NA
 VelocityNA

Shipping and Storage Data:

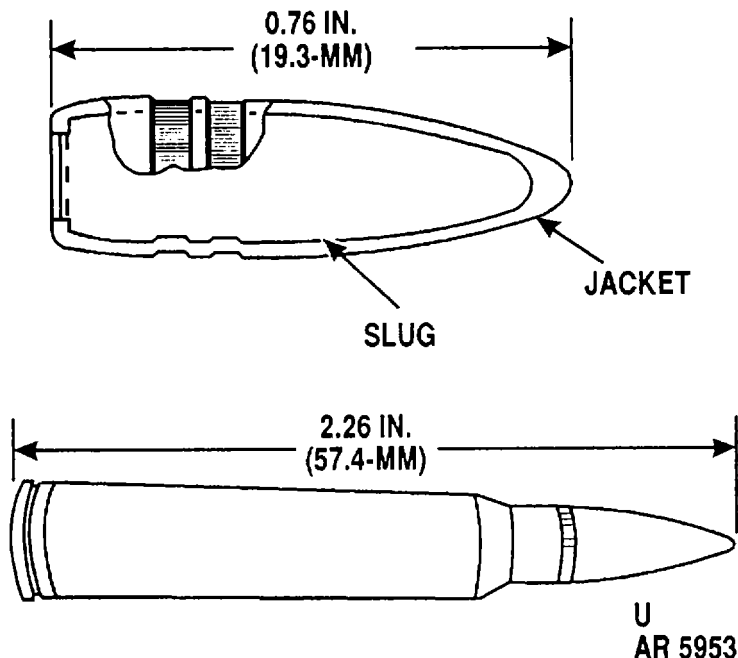
Quantity-distance class/
 SCG1.4S
 Storage codeClass V
 DOT shipping class.....C
 DOT designationSMALL ARMS
 AMMUNITION
 Drawing number.....10542379

References:

SB 700-20
 TM 9-1005-249-10
 TM 9-1300-206

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CARTRIDGE, DUMMY, 5.56MM, M232



Type Classification:

STD - AMCTC 4485.

Use:

Rifles, 5.56mm, M16 and M16A1. The cartridge is an inert round used for testing the mechanisms of 5.56 weapons.

Description:

DUMMY Cartridge. The cartridge is identified by a black chemical finish over the entire round and by the absence of a primer.

Tabulated Data:

DODAC.....1305-A069
 Weight161 gr
 Length2.26 in. (57.4 mm)
 TracerNA
 PrimerNA
 FuzeNA
 Explosive:
 TypeNA
 Weight.....NA

Incendiary:

TypeNA
 WeightNA

Propellant:

TypeNA
 Weight.....NA

Performance:

Chamber pressure.....NA
 Velocity.....NA

Shipping and Storage Data:

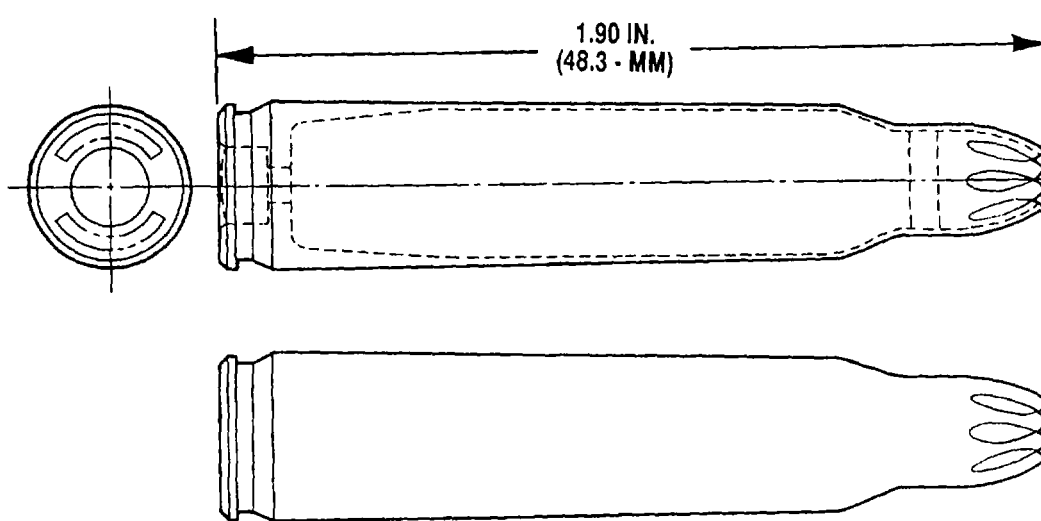
Quantity-distance class/
 SCGNA
 Storage codeNA
 DOT shipping classNA
 DOT designationNONEXPLOSIVE
 AMMUNITION
 Drawing number.....10534146

References:

SB 700-20
 TM 9-1005-249-10
 TM 9-1300-206

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CARTRIDGE, 5.56MMN, BLANK, M755



U
AR 5947

Type Classification

STD - MSR 04786005.

Use:

The M755 blank cartridge is especially designed for use with the Sting Ring Airfoil Munition System which consists of the M234 launcher and the 64mm riot control M743 projectile fired from the M1GA1 rifle.

Description:

BLANK Cartridge. The cartridge is only for use with the M234 riot control 64mm projectile launcher. The launcher is attached to the flash suppressor of the M16A1 rifle and actuated by firing an M755 5.56mm blank cartridge. The M755 blank cartridge is the only cartridge that will give the projectile M743 the proper velocity. Use of other blank cartridges may damage the system.

The cartridge is loaded with 12 grains of Dupont Hi Skor 700X propellant closed with a seven petal nose crimp and moisture sealed. The crimped tips of the cartridge is painted with yellow lacquer for identification and thus lessen the chance of mixing them with the standard M16A1 rifle blank cartridges.

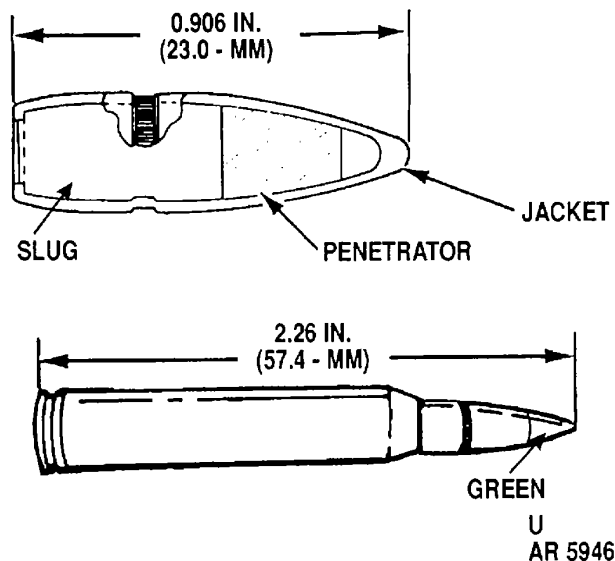
Function:

The blank cartridge is fed into the firing chamber. When fired, the primer ignites the propellant. The expanding propellant gases pass from the muzzle of the rifle into the launcher manifold. The projectile is ejected from the launcher barrel. The propellant charge is not sufficient to eject the cartridge case which must be ejected by pulling the charging handle of the rifle all the way back.

Tabulated Data

DODAC	TBA
Weight	112 gr
Length.....	1.9 in. (48.3 mm)
Tracer	NA
Primer.....	Percussion
Fuze.....	NA
Explosive:	
Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight.....	NA
Propellant:	
Type	Hi Skor 700X
Weight	12 gr

CARTRIDGE, 5.56MM, BALL, M855



Type Classification:

STD - MSR 05826003.

Use:

Machine Gun, 5.56mm, M249E1; and Rifle, 5.56mm, M16A2. The cartridge is intended for use against personnel and unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by a green bullet tip.

Tabulated Data:

DODAC.....1305-A059
 UNO serial number0012
 UNO proper shipping name.....Cartridges for weapons, inert projectile
 Weight190 gr
 Length.....2.26 in. (57.4 mm)
 TracerNA
 Primer.....Percussion
 FuzeNA
 Explosive:
 TypeNA

Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeWC 844
 Weight26.1 gr
 Projectile:
 Weight.....62 gr

Performance:

Chamber pressure55,000 psi
 Velocity3025 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG.....1.4S
 Storage codeClass V
 DOT shipping classC
 DOT designationSMALL ARMS AMMUNITION
 Drawing number9342862

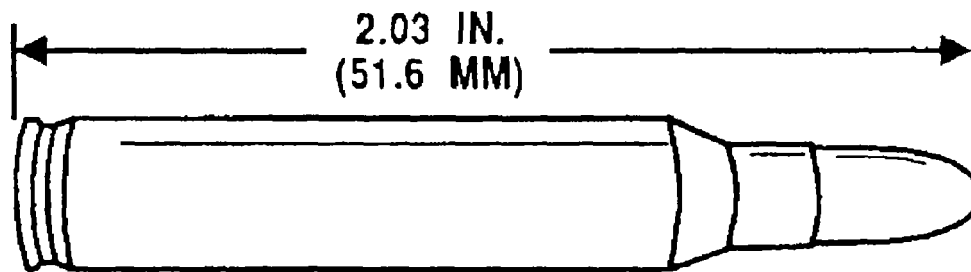
References:

DARCOM 700-3-2
 TM 9-1300-206
 TM 9-1305-201-20&P

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CARTRIDGE, 5.56MM, PLASTIC, PRACTICE, M862



**U
AR 5955**

Type Classification:

STD - To be approved.

Use:

Rifles, 5.56mm, M16A1 and M16A2 with M2 Practice Bolt. The cartridge is for training in local and urban training areas where range restrictions preclude use of full range standard service ammunition.

Description:

PLASTIC Cartridge. The cartridge is identified by a blue plastic bullet.

Tabulated Data:

DODAC..... 1305-A065
 UNO serial number 0012
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight 108 gr
 Length..... 2.03 in. (51.6 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA

Explosive:

TypeNA
 Weight.....NA

Incendiary:

TypeNA
 Weight.....NA

Propellant:

TypeWPR 260
 Weight.....8.7 gr

Projectile:

Weight.....3.6 gr

Performance:

Chamber pressure..... 15,750 psi
 Velocity.....4525 fps, 15 ft from muzzle

Shipping and Storage Data:

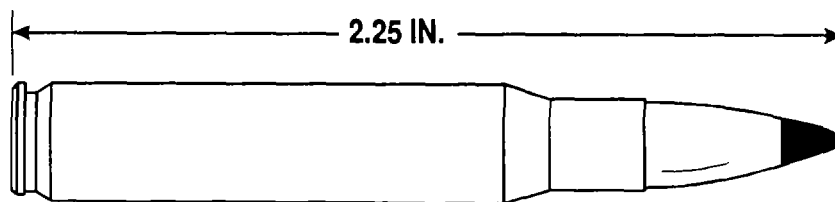
Quantity-distance class/
 SCG1.4S
 Storage codeClass V
 DOT shipping class.....C
 DOT designationSMALL ARMS AMMUNITION
 Drawing number.....12598589

References:

SB 700-20
 TM 9-1005-249-10
 TM 9-1300-206

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CARTRIDGE, 5.56MM, ARMOR PIERCING (AP), M995



U
AR 7218

Type Classification:

Std - 29 Mar 96.

Use:

Rifle, 5.56MM, M16A2 Rifle, 5.56MM, M249 Squad Automatic Weapon.

Description:

Armor Piercing Cartridge. This cartridge is identified by black bullet tip identification paint.

Purpose:

This cartridge provides improved penetration performance against various targets as compared to standard ball ammunition.

Tabulated Data:

DODAC..... 1305-AA01,
1305-AA02
Weight 180 gr
Length..... 2.25 in.
Tracer N/A
Primer..... 4.5mm Berdan
Fuze..... N/A
Explosive:
Type N/A
Weight..... N/A

Incendiary:

Type N/A
Weight..... N/A

Propellant:

Type WCR845
Weight..... 27.5 gr

Projectile:

Weight..... 52 gr

Performance:

Chamber pressure..... 50,250 psi
Velocity..... 3324 fps at 78 ft
from muzzle

Shipping and Storage Data:

Linked AP cartridge..... 1305-01-393-7050,
AA01
Linked AP cartridge with tracer.. 1305-01-393-7052,
AA02
Quantity-distance class/SCG..... 1.4S
Storage code..... Class C
DOT shipping class C
DOT designation SMALL ARMS
AMMUNITION
Drawing number..... 12956131

References:

TM 9-1005-201-10
TM 9-1005-319-10
TM 9-1305-201-20&P
TM 9-1305-201-34&P

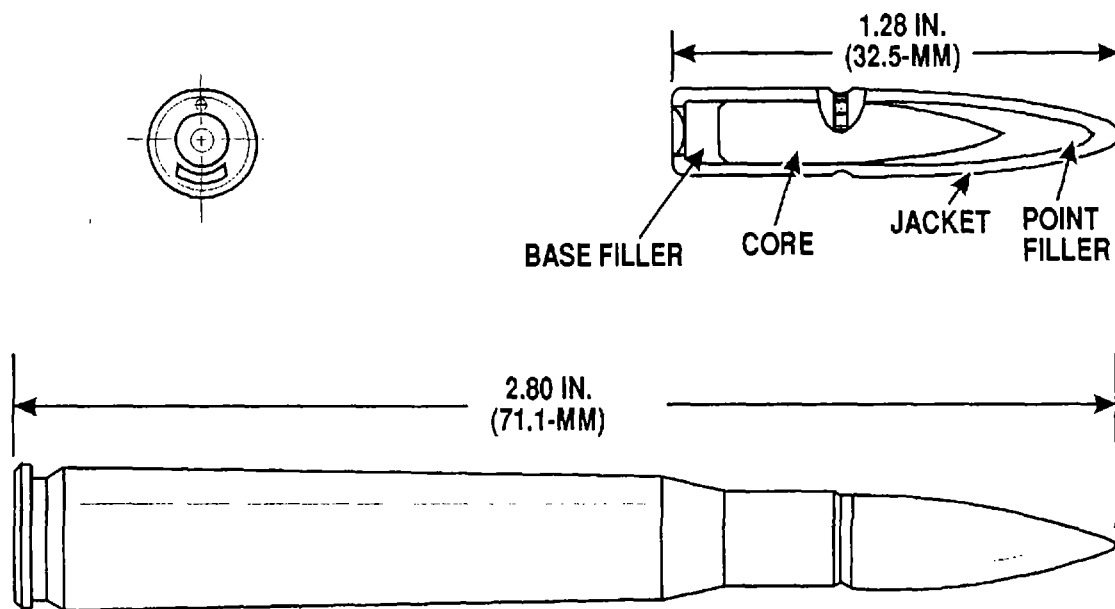
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CHAPTER 11
7.62MM CARTRIDGES

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CARTRIDGE, 7.62MM, BALL, M59



U
AR 5956

Type Classification:

STD - OTCM 36841.

Use:

Machine Guns, 7.62mm, M60 and M219; and Rifle, 7.62mm, M14. The cartridge is intended for use against personnel and unarmored targets.

Description:

BALL Cartridge. The cartridge is identified by a plain bullet tip.

Tabulated Data:

DODAC..... 1305-A143
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 393 gr
 Length..... 2.8 in. (71.1 mm)
 Tracer NA
 Primer NA

Fuze NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 846
 Weight 46 gr
 Projectile:
 Weight..... 150.5 gr

Performance:

Chamber pressure 50,000 psi
 Velocity 2750 fps, 78 ft from muzzle

Shipping and Storage Data:

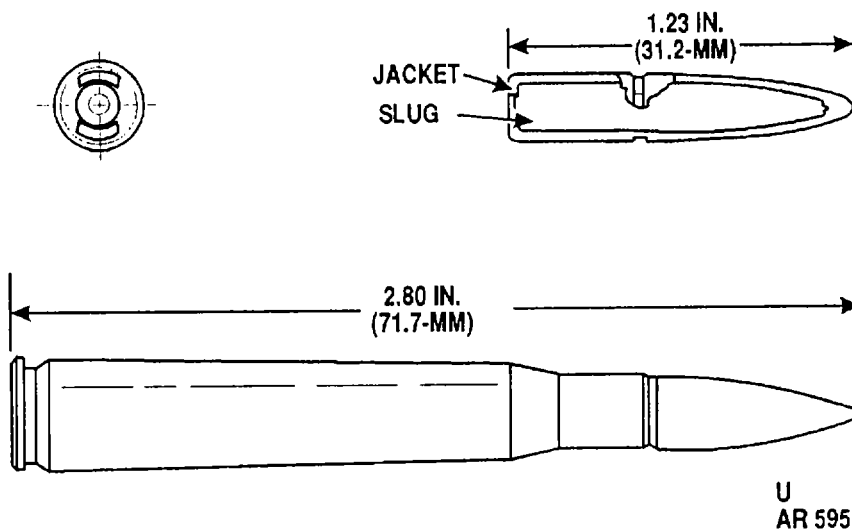
Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7553702

References:

SB 700-20
TM 9-1005-223-10
TM 9-1005-223-12P

TM 9-1005-224-10
TM 9-1005-233-10
TM 9-1005-298-12
TM 9-1005-313-10
TM 9-1300-206

CARTRIDGE, 7.62MM, HIGH PRESSURE TEST, M60



Type Classification:

OBS - MSR 11756003.

Use:

All 7.62mm weapons. The cartridge is not for field issue, but is used for proof firing of weapons during manufacture, test, or repair.

Description:

HIGH PRESSURE TEST Cartridge. The cartridge is identified by a stannic-stained (silvered) case.

Function:

The cartridge is loaded with a special propellant to produce pressures substantially in excess of the service cartridge.

Tabulated Data:

DODAC..... 1305-A129
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 412 gr
 Length 2.8 in. (71.1 mm)
 Tracer NA
 Primer Percussion
 Fuze NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type IMR 4475
 Weight 41 gr

Projectile:

Weight 171.5 gr

Performance:

Chamber pressure 67,500 psi
 Velocity NA

Shipping and Storage Data:

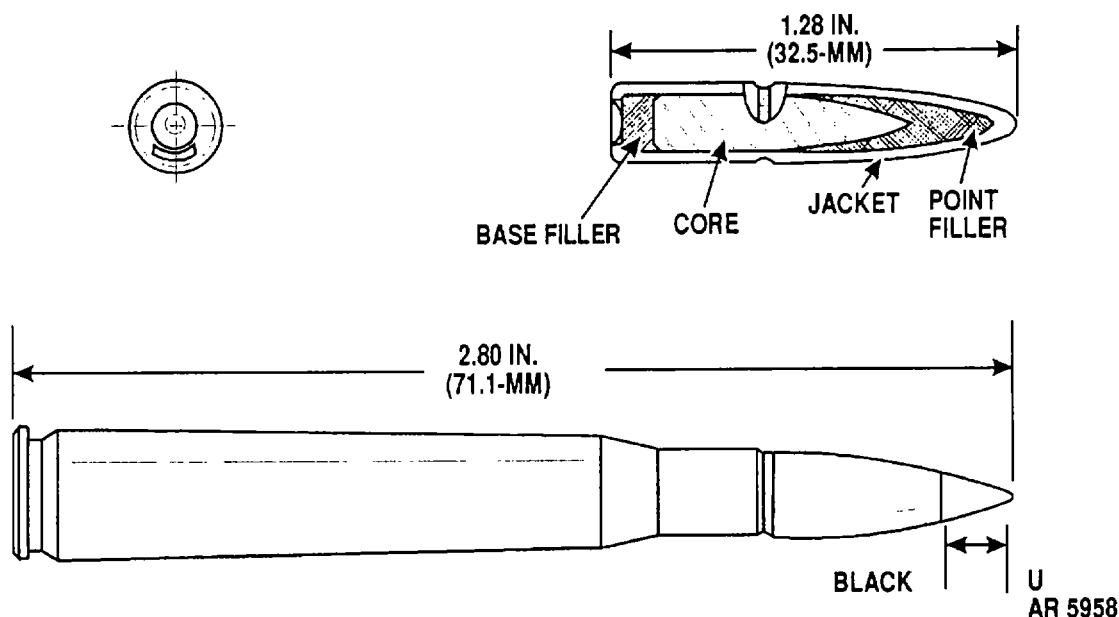
Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number 7553703

References:

SB 700-20
 TM 9-1005-223-10
 TM 9-1005-223-12P
 TM 9-1005-224-10
 TM 9-1005-233-10
 TM 9-1005-298-12
 TM 9-1005-313-10
 TM 9-1300-206

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CARTRIDGE, 7.62MM, ARMOR PIERCING, M61



Type Classification:

OBS - MSR 11756003.

Use:

Machine Guns, 7.62mm, M60, M219 and M240; and Rifle, 7.62mm, M14. The cartridge is used in rifles and machine guns against personnel and light armored or unarmored targets, concrete shelters, and similar bullet-resisting targets.

Description:

ARMOR PIERCING Cartridge. The cartridge is identified by a black bullet tip.

Tabulated Data:

DODAC..... 1305-A120
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 393 gr
 Length 2.8 in. (71.1 mm)
 Tracer NA
 Primer Percussion

Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type IMR 4475
 Weight 41 gr
 Projectile:
 Weight..... 150.5 gr

Performance:

Chamber pressure 50,000 psi
 Velocity 2750 fps, 78 ft from muzzle

Shipping and Storage Data:

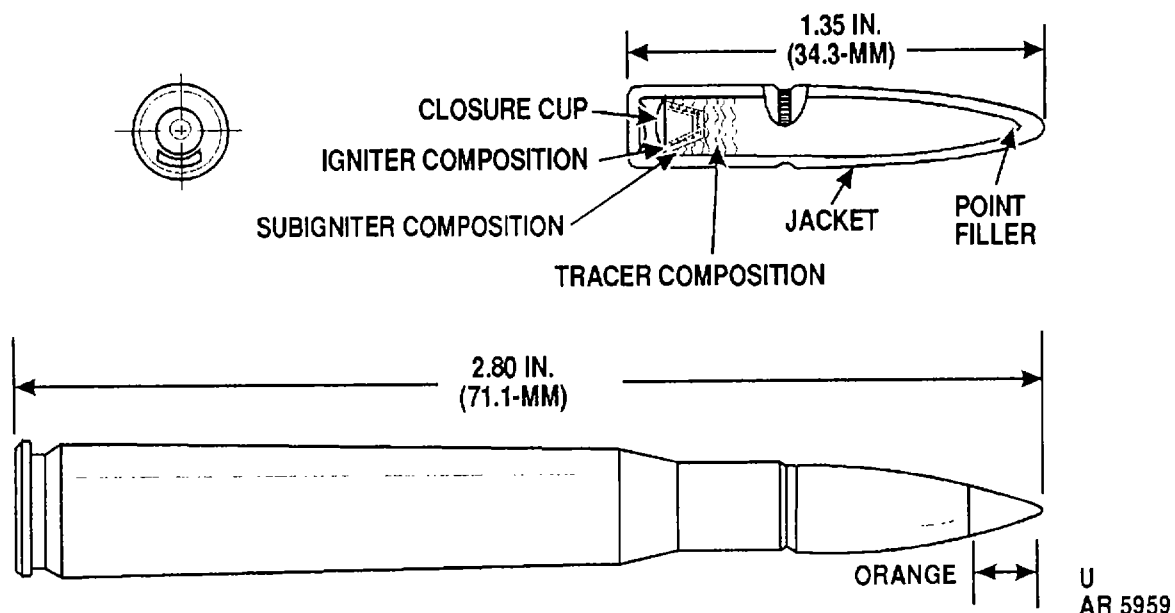
Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7553704

References:

SB 700-20
TM 9-1005-223-10
TM 9-1005-223-12P

TM 9-1005-224-10
TM 9-1005-233-10
TM 9-1005-298-12
TM 9-1005-313-10
TM 9-1300-206

CARTRIDGE, 7.62MM, TRACER, M62



Type Classification:

CON - MSR 11756003.

Use:

Machine Guns, 7.62mm, M60, M219 and M240; and Rifle, 7.62mm, M14. The tracer is intended to permit visible observation of the bullet's in-flight path or trajectory to the point of impact.

Description:

TRACER Cartridge. The cartridge is identified by an orange bullet tip.

Tabulated Data:

DODAC..... 1305-A124
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 383 gr
 Length..... 2.8 in. (71.1 mm)
 Tracer R284

Primer..... Percussion
 Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 846
 Weight 46 gr
 Projectile:
 Weight 142 gr

Performance:

Chamber pressure 50,000 psi
 Velocity 2750 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 10522000

References:

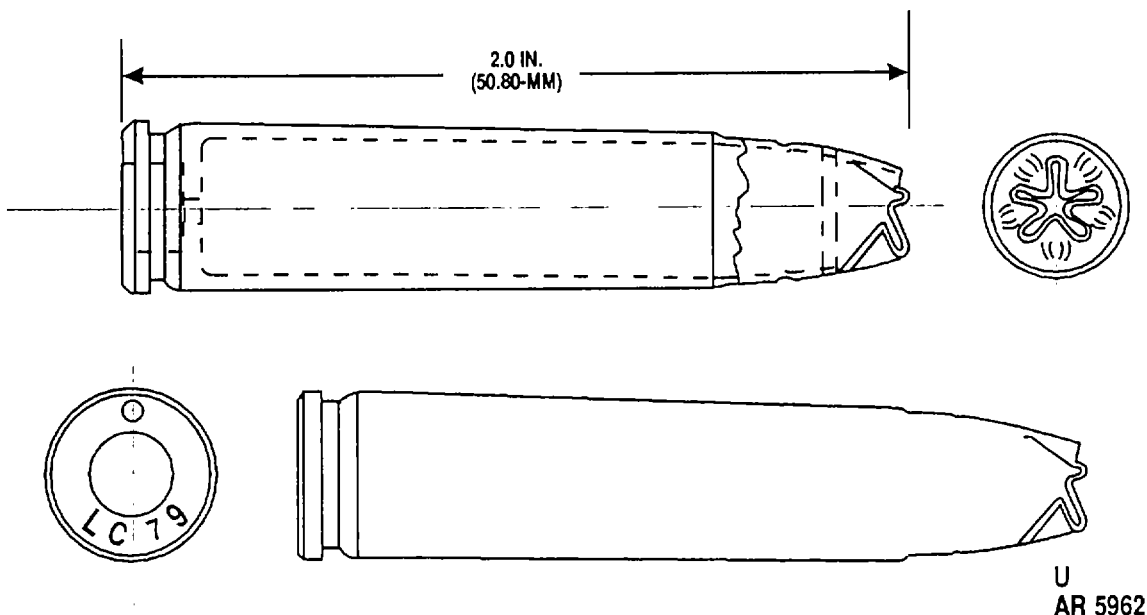
SB 700-20
TM 9-1005-223-10
TM 9-1005-223-12P

TM 9-1005-224-10
TM 9-1005-233-10
TM 9-1005-298-12
TM 9-1005-313-10
TM 9-1300-206

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CARTRIDGE, 7.62MM, GRENADE, M64



Type Classification:

OBS - MSR 11756003.

Use:

Rifle, 7.62mm, M14.

Description:

GRENADE Cartridge. The cartridge is identified by a rose-petal (rosette-crimp) closure of the cartridge case mouth and sealed with red lacquer.

Function:

The cartridge provides pressure upon functioning to project rifle grenade to a desired target when using a grenade projectile adapter and dragon missile launch effect trainer (LET).

Tabulated Data:

DODAC..... 1330-G839
 UNO serial number 0014

UNO proper shipping

name Cartridges for
 weapons, blank
 Weight 295 gr
 Length 2 in. (50.8 mm)
 Tracer NA
 Primer Percussion
 Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type WC 8:30
 Weight 45 gr
 Projectile:
 Weight NA

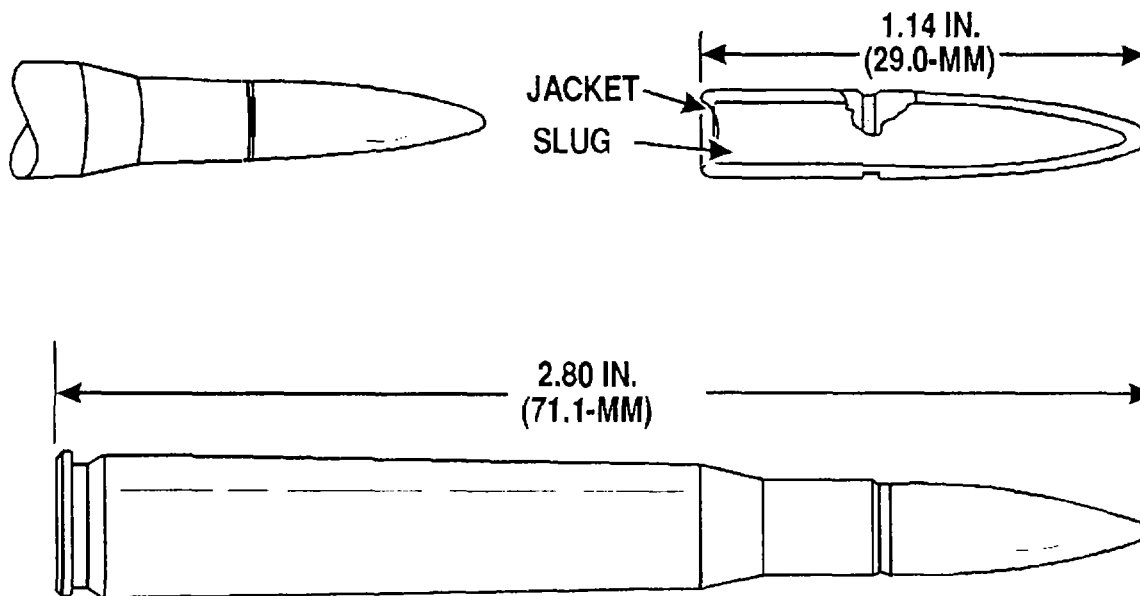
Performance:

Chamber pressure NA
 Velocity 160 fps, 5.(, ft from
 muzzle for projected grenade

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code Class V

CARTRIDGE, 7.62MM, BAL., M80



U
AR 5963

Type Classification:

STD - MSR 07798001.

Use:

Machine Guns, 7.62mm, M60, M219 and M240; and Rifle, 7.62mm, M14. The cartridge is intended for use against personnel and unarmored targets.

Description:

BALL Cartridge. This cartridge is identified by a plain bullet tip.

Tabulated Data:

DODAC..... 1305-A122
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 392 gr
 Length..... 2.8 in. (71.1 mm)
 Tracer NA
 Primer Percussion
 Fuze NA

Explosive:

Type NA
 Weight NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type WC 846
 Weight 46 gr

Projectile:

Weight 146 gr

Performance:

Chamber pressure 50,000() psi
 Velocity 27501) fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 10521998

References:

SB 700-20
TM 9-1005-223-10
TM 9-1005-223-12P

TM 9-1005-224-10
TM 9-1005-233-10
TM 9-1005-298-12
TM 9-1005-313-10
TM 9-1300-206

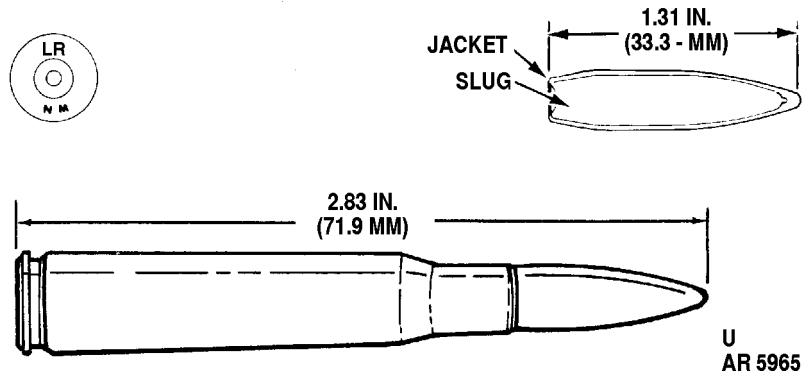
References:

SB 700-20
TM 9-1005-223-10
TM 9-1005-223-12P

TM 9-1005-224-10
TM 9-1005-233-10
TM 9-1005-298-12
TM 9-1005-313-10
TM 9-1300-206

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CARTRIDGE, 7.62MM, BALL, SPECIAL, M118: LONG RANGE



Type Classification:

STD - MSR.

Use:

Rifles, 7.62mm, M14, M21, M24, and M40A1. The cartridge is intended and specifically prepared for use in high accuracy weapons.

Description:

BALL, LONG RANGE Cartridge. The cartridge is identified by cartridge case head stampings with LR design mark, manufacturer and year.

Tabulated Data:

DODAC -----	1305-AA11
UNO serial number -----	0012
UNO proper shipping name -----	Cartridges for weapons, inert projec- tile
Weight -----	390 gr
Length -----	2.83 in. (71.9 mm)
Tracer -----	NA
Primer -----	Percussion
Fuze -----	NA
Explosive:	
Type -----	NA
Weight -----	NA

Incendiary:

Type -----	NA
Weight -----	NA

Propellant:

Type -----	WC 750
Weight -----	44 gr

Projectile:

Weight -----	175 gr
--------------	--------

Performance:

Chamber pressure -----	52,000 psi
Velocity -----	2640 fps

Shipping and Storage Data:

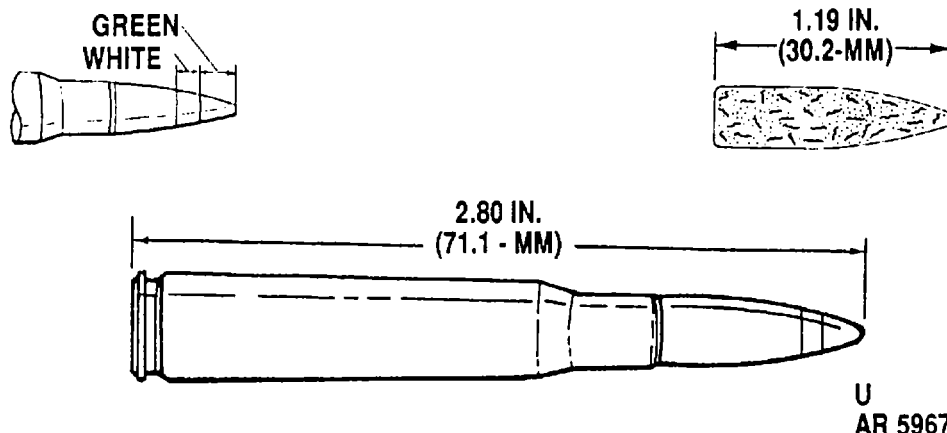
Quantity-distance class/SCG -----	1.4S
Storage code -----	Class V
DOT shipping class -----	C
DOT designation -----	SMALL ARMS AMMUNITION
Drawing number -----	8597555

References:

EM 0007
 TM 9-1005-223-10
 TM 9-1005-223-12P
 AR 385-64
 DA PAM 385-64

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CARTRIDGE, 7.62MM, FRANGIBLE, M160



Type Classification:

STD - AMCTC 2186.

Use:

Machine Guns, 7.62mm, M219 and M240. The cartridge is designed for firing single shots in the machine gun for gunnery practice.

Description:

FRANGIBLE Cartridge. The cartridge is identified by a green bullet tip with a white ring to the rear of the green tip.

Function:

The frangible bullet, upon striking a target, disintegrates, leaving a mark at the point of impact. It is not to be fired on indoor ranges unless they are well ventilated to prevent the buildup of bullet "dust," which is toxic.

Tabulated Data:

DODAC..... 1305-A147
 UNO serial number 0012
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 315 gr
 Length 2.8 in. (71.1 mm)
 Tracer NA
 Primer..... Percussion

Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type SR 8074
 Weight 10.5 gr
 Projectile:
 Weight 108.5 gr

Performance:

Chamber pressure NA
 Velocity 1320 fps, 100 yd from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 10522476

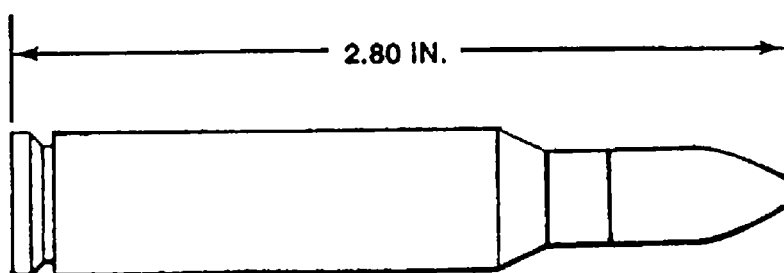
References:

SB 700-20
 TM 9-1005-224-10
 TM 9-1005-233-10
 TM 9-1005-298-12
 TM 9-1005-313-10
 TM 9-1300-206

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CARTRIDGE, 7.62MM, DIM TRACER, M276



U
AR 4972

Type Classification:

STD - Being performed.

Use:

Rifle, 7.62mm, M14; Machine Guns, 7.6mm, M60, M240, M219 and M134. The combat cartridge is to be used by soldiers equipped with night vision equipment.

Description:

COMBAT Cartridge. The cartridge is identified by a pink ring behind a green tip.

Tabulated Data:

DODAC..... 1305-A163
 UNO serial number 0012
 UNO proper shipping
 name Cartridges for
 weapons, inert pro-
 jectile
 Weight 381 gr
 Length 2.8 in.
 Tracer R440 Trace Mix
 Primer Percussion
 Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:

Type NA
 Weight NA
 Propellant:
 Type WC-846
 Weight 46 gr
 Projectile weight 140-150 gr

Performance:

Chamber pressure 50,000 psi
 Velocity 2750 fps (GMCS)
 and 2680 fps (GM),
 78 ft from muzzle

Shipping and Storage Data:

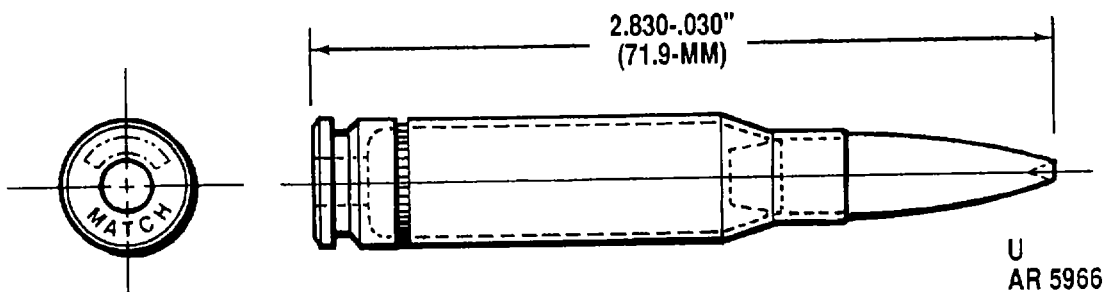
Quantity-distance class/
 SCG 1.4S
 Storage code C
 DOT shipping class C
 DOT designation CARTRIDGES
 SMALL ARMS

References:

DMWR 9-1300-0017-D1
 TM 9-1305-201-20&P
 TM 9-1305-201-34&P

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CARTRIDGE, 7.62 MM, MATCH, M852



Type Classification:

STD - MSR 09816009.

Use:

Rifle, 7.62 mm, M14, NATIONAL MATCH. The cartridge is intended and specifically prepared for use in those weapons designated as competitive rifles and also for marksmanship training. The cartridge is not for combat use.

Description:

MATCH Cartridge. The cartridge is identified by the cartridge case head stamping of MATCH. It also has a knurl at the base of the cartridge case and a hollow point bullet.

Tabulated Data:

DODAC..... 1305-A171
 UNO serial number 0012
 UNO proper shipping
 name Cartridges for
 weapons, inert projectile
 Weight 385 gr
 Length..... 2.83 in. (71.9 mm)

Tracer-NA
 PrimerPercussion
 FuzeNA
 Explosive:
 TypeNA
 WeightNA
 Incendiary:
 TypeNA
 WeightNA
 Propellant:
 TypeIMR 4895
 Weight42 gr
 Bullet:
 TypeHollow point
 Weight168 gr

Performance:

Chamber pressure50,000 psi
 Velocity2550 fps, 772 nips

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.4S
 Storage codeClass V
 DOT shipping class C
 DOT designationSMALL ARMS
 AMMUNITION
 Drawing number..... 9341551

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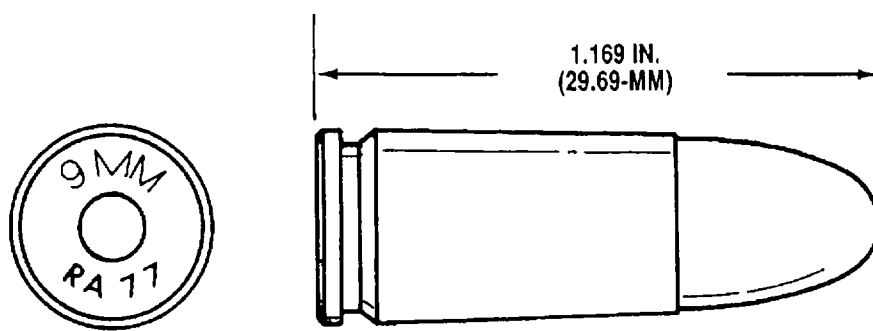
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CHAPTER 12
9 MM CARTRIDGES

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CARTRIDGE, 9 MM, BALL



U
AR 5970

Type Classification:

Commercial.

Use:

Modified M3 Submachine Gun or commercial weapons. (The use in M9 Pistol is not authorized.) The cartridge is intended for use against personnel.

Description:

BALL Cartridge.

Tabulated Data:

DODAC	1305-A360
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	182 gr
Length	1.169 in. (29.69 mm)
Tracer	NA
Primer	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA

Incendiary:

Type NA
Weight NA

Propellant:

Type Commercial
Weight MBR
Projectile weight 115 gr

Performance:

NOTE

Mid case pressures normally run 8000 to 10,000 psi higher than case mouth pressure.

Mid case pressure	38,500 psi (avg), 43,000 psi (max)
Velocity	1125 + 90 fps, 15 ft from muzzle

Shipping and Storage Data:

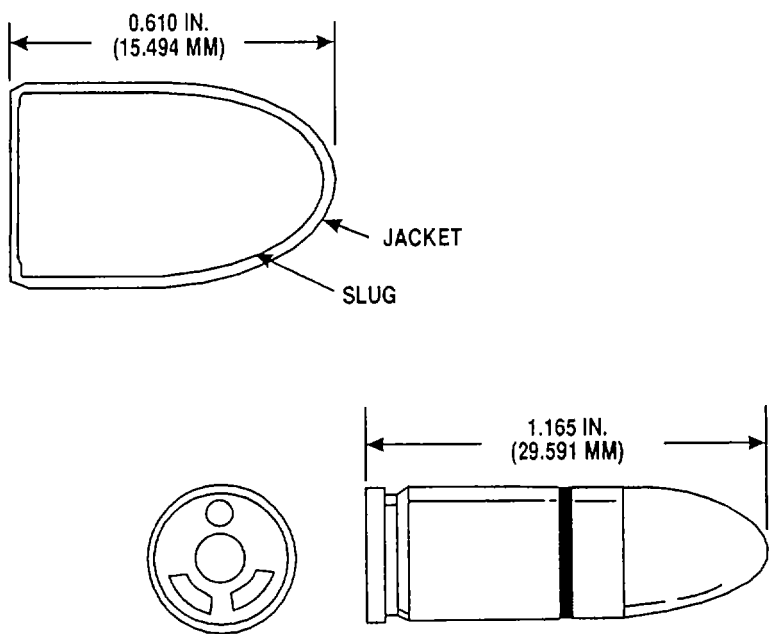
Quantity-distance class/ SCG	1.4S
Storage code	Class V
DOT shipping class	C
DOT designation	SMALL ARMS AMMUNITION
Drawing number	10542448

References:

SB 700-20
TM 9-1300-206

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CARTRIDGE, 9 MM, BALL, NATO, M882



U
AR 5971

Type Classification:

HQDA (DAMA-CSM), dated 15 April 85.

Use:

Pistol, 9 mm, M9. The cartridge is intended for use against personnel.

NOTE

M882 ammunition can be used in the following nonstandard weapons:

<u>Pistol</u>	<u>Submachine Guns</u>
HK P7 series (GE)	HK MP5 (GE)
Walther P38 (GE)	HK MP5SD (GE)
FN P35 (BE)	IMI Uzi (IS)
	Baretta M12 (IT)
	FFV M45/45B (SW)
	Madsen M50 (DE)
	CZ M23 (CZ)
	Sten MK II (UK)
	Sterling 12A3 (UK)

Description:

BALL Cartridge. The cartridge is identified by the plain bullet tip.

Tabulated Data

DODAC	1305-A3(3)
UNO serial number	0012
UNO proper shipping name	Cartridges for weapons, inert projectile
Weight	179 gr
Length	1.165 in. (29.591 mm)
Tracer	NA
Primer	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight	NA
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	HPC 26
Weight	6 gr
Projectile weight	112 gr

Performance:

Case mouth pressure31,175 psi (avg),
36,250 psi (max)
Velocity1263 ± 5 fps, 15 ft
from muzzle

Storage code Class V
DOT shipping classC
DOT designationSMALL ARMS
AMMUNITION
Drawing number.....9345211

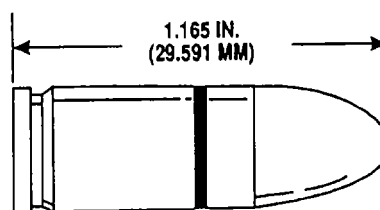
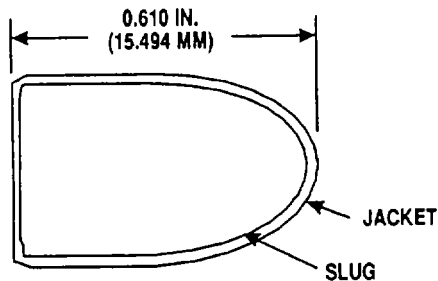
Shipping and Storage Data:

Quantity-distance class/
SCG1.4S

References:

SB 700-20
TM 9-1300-206

CARTRIDGE, 9MM, HIGH PRESSURE TEST, M905



U
AR 5972

Type Classification:

HQDA (DAMA-CSM), dated 15 April 85.

Use:

Proof testing of M9 pistols. The cartridge is intended for use in proofing new pistols and test barrels to demonstrate safety prior to releasing weapons to the field.

Description:

HIGH PRESSURE TEST Cartridge. The cartridge is identified by a tinned cartridge case and high pressure test head stamp.

Tabulated Data:

DODAC.....1305-A364
 UNO serial number 0012
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight 179 gr
 Length..... 1.165 in. (29.591 mm)
 Tracer NA
 Primer..... Percussion

Fuze..... NA
 Explosive:
 Type NA
 Weight.....NA
 Incendiary:
 TypeNA
 WeightNA
 Propellant:
 Type WC 370
 Weight.....7.5 gr

Performance:

Chamber pressure50,000 psi
 Velocity..... NA

Shipping and Storage Data:

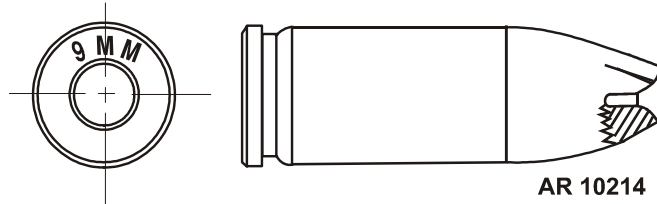
Quantity-distance class/
 SCG 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number9378265

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 9MM, MK243 MOD 0, JACKETED HOLLOW-POINT



Type Classification:

STD A, June 2002.

Use:

The cartridge is intended for use against personnel. It is to be used by the Criminal Investigation Command Units (USACIDC) in situations where high lethality and limited over-penetration of the target are necessary to meet the mission profile.

NOTE

THE USE OF THIS CARTRIDGE IS LIMITED TO USACIDC UNITS ONLY, LOCATED IN THE UNITED STATES AND ITS TERRITORIES. THIS CARTRIDGE CANNOT BE ISSUED TO UNITS DEPLOYING OUTSIDE THE UNITED STATES OR ITS TERRITORIES.

THE CARTRIDGE CAN BE FIRED FROM THE M9 PISTOL (BARETTA), M11 PISTOL (SIGARMS INC.), HECKLER AND KOCH (H&K), MP5 SUBMACHINE GUN, H&K P9S PISTOL, AND SIGARMS INC. P226 PISTOL. USACIDC USE WOULD BE EXCLUSIVE TO THE M11 PISTOL.

Description:

The MK243 MOD 0 cartridge has a hollow point bullet tip.

Tabulated Data:

Cartridge design type.....	Anti-personnel
DODAC	1305-A260
NSN	1305-01-357-8488
Weight.....	147 gr
Length	1.10M50 in.max
Tracer.....	NA
Primer.....	Percussion
Fuze	NA
Explosive:	
Type	NA
Weight.....	NA
Incendiary:	
Type	NA
Weight.....	NA
Propellant:	
Type	Hercules type 84/ Winchester WPR-293
Weight.....	4.7 gr
Projectile weight.....	

Performance:

Accuracy:

The cartridge will have an extreme spread of 3.5 inches at 50 yards from a five round group (fired from a 4 in. barrel).

Penetration:

The cartridge will have a 6 inch minimum penetration when fired into ordnance gelatin (10% by weight) at 15 feet from the muzzle.

Expansion:

The cartridge will have a .50 inch minimum expansion when fired into ordnance gelatin (10% by weight) at 15 feet from the muzzle.

Shipping and Storage Data:

Coast Guard class	1
DOD hazard class	1.4
DOD transportation class	C
Firefighting group.....	1
Storage compatibility group	S
UNO no.	0012
Proper shipping name	Cartridge for Weapons, Inert Projectile
DOT designation	Small Arms Ammunition
Drawing no.	7232152
Package nominal overall height	1.50 in. Shipping con- tainer

Package nominal overall length.....	12.03 in. Shipping con- tainer
Package nominal overall width.....	6.09 in. Shipping Con- tainer
Net explosive weight	0.00007 Ship- board pounds; 0.0007 Transpor- tation pounds
Unpackaged unit weight	0.03 pounds

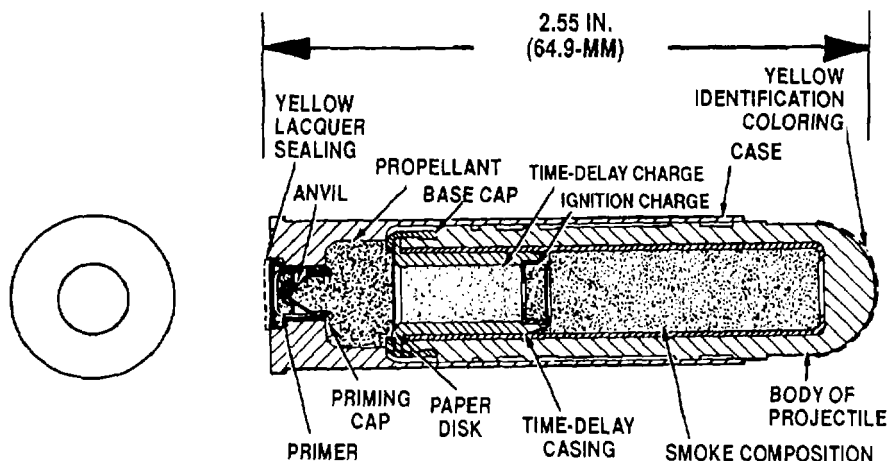
Packaging Data:

Carton box.....	50 rounds/box, 20 boxes/M2A1 container (1000 rounds per M2A1)
M2A1 containers.....	2- M2A1 contain- ers/wirebound box, 36 wire- bound boxes/pal- let (72,000 rounds /pallet)

CHAPTER 13
14.5 MM CARTRIDGES

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CARTRIDGE, 14.5 MM, TRAINER-SPOTTER, M181A1



U
AR 5973

Type Classification:

STD - AMCTC 138.

Use:

Artillery Trainer, M31.

Description:

TRAINER-SPOTTER Cartridge. The cartridge has a chemical-filled (smoke composition) projectile. It is identified by the markings on the cartridge case and a yellow projectile tip. The cartridge has no fuze and it uses a time delay element to provide an air burst.

Function:

When the cartridge is fired, the heat of the propellant gases ignites the delay element. The delay element burns 3 seconds and, in turn, ignites the smoke composition. The heat and pressure produced by the burning filler rupture the plastic closing disc at the projectile base and a visible puff of smoke is emitted.

Tabulated Data:

DODAC.....1305-A365
 UNO serial number0012
 UNO proper shipping name Cartridges for weapons, inert projectile

Weight1065 gr
 Length2.55 in. (64.9 mm)
 TracerNA
 PrimerPercussion
 FuzePowder train delay
 Explosive:
 TypeNA
 Weight.....NA
 Incendiary:
 TypeNA
 Weight.....NA
 Propellant:
 TypeHi Skor 700X
 Weight.....3.5 gr

Performance:

Chamber pressure..... NA
 Velocity100 mps, 4 m from muzzle; 328 fps, 15 ft from muzzle

Shipping and Storage Data:

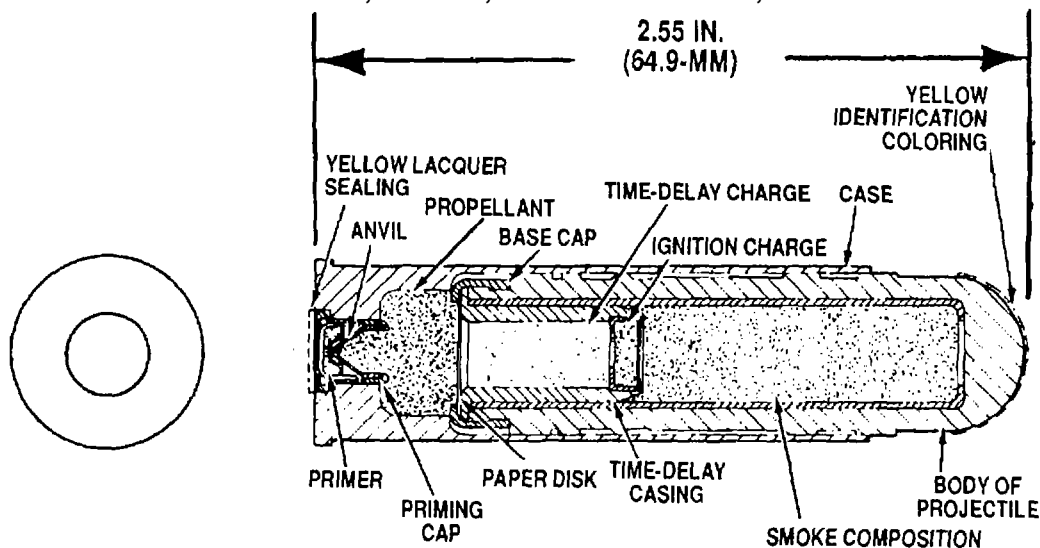
Quantity-distance class/
 SCG1.4S
 Storage code..... Class V
 DOT shipping classC
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 9098295

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 14.5 MM, TRAINER-SPOTTER, M182A1



U
AR 5974

Type Classification:

STD - AMCTC 138.

Use:

Artillery Trainer, M31.

Description:

TRAINER-SPOTTER Cartridge. The cartridge has a chemical-filled (smoke composition) projectile. It is identified by the markings on the cartridge case and a yellow projectile tip. The cartridge has no fuze and it uses a time delay element to provide an air burst.

Function:

When the cartridge is fired, the heat of the propellant gases ignites the delay element. The delay element burns 6 seconds and, in turn, ignites the smoke composition. The heat and pressure produced by the burning filler rupture the plastic closing disc at the projectile base and a visible puff of smoke is emitted.

Tabulated Data:

DODAC1305-A366
 UNO serial number0012
 UNO proper shipping nameCartridges for weapons, inert projectile

Weight 1065 gr
 Length..... 2.55 in. (64.9 mm)
 Tracer- NA
 Primer..... Percussion
 Fuze Powder train delay
 Explosive:
 Type - NA
 Weight NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type Hi Skor 700X
 Weight..... 3.5 gr
 Performance:

Chamber pressure..... NA
 Velocity 100 ips, 4 m from muzzle; 328 fps, 15 ft from muzzle

Shipping and Storage Data:

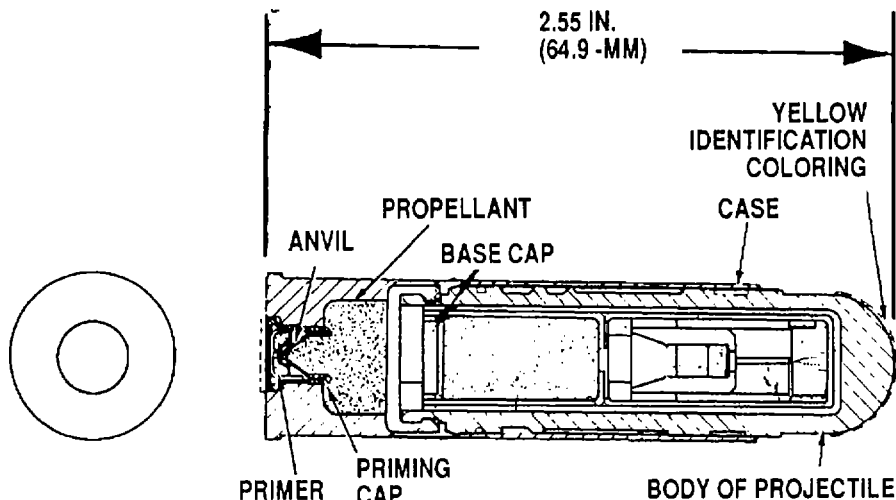
Quantity-distance class/
 SCG 1.4S
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 9098297

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 14.5 MM, TRAINER-SPOTTER, M183A1



U
AR 5975

Type Classification:

STD - AMCTC 138.

Use:

Artillery Trainer, M31.

Description:

TRAINER-SPOTTER Cartridge. The cartridge consists of a cartridge case, a chemical filled (smoke composition) projectile, and a fuze with a small explosive charge to provide a visible and audible verification at point of impact. The cartridge is identified by the markings on the cartridge case and a yellow projectile tip.

Function:

The projectile impacts with the target. The point detonating fuze functions and an explosion charge within the fuze ignites the smoke composition and ejects it out the base of the projectile.

Tabulated Data:

DODAC1305-A367
 UNO serial number 0012
 UNO proper shipping name..... Cartridges for weapons, inert projectile
 Weight1065 gr

Length2.55 in. (64.9 mm)
 Tracer NA
 PrimerPercussion
 FuzePD
 Explosive:
 Type NA
 WeightNA
 Incendiary:
 TypeNA
 WeightNA
 Propellant:
 TypeHi Skor 700X
 Weight 3.5 gr
 Performance:
 Chamber pressureNA
 Velocity100 nips, 4 m from muzzle; 328 fps, 15 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4S
 Storage codeClass V
 DOT shipping classC
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 9098293

References:

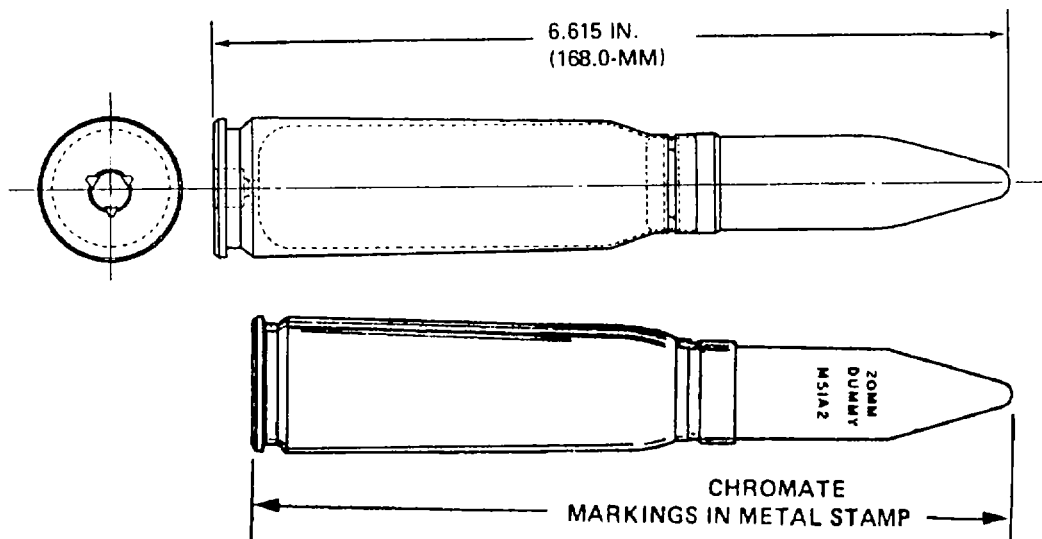
SB 700-20
 TM 9-1300-206

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CHAPTER 14
20MM CARTRIDGES

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CARTRIDGE, DUMMY, 20MM, M51A2



U
AR 5976

Type Classification:

STD - AMCTC 6900.

Use:

Guns, 20mm, M39, M61, M139, M168, M195 and M197. The cartridge is a completely inert assembly used for filling the conveyor system during shipment or storage and for nonfiring system checkout.

Description:

DUMMY Cartridge.

Tabulated Data:

DODAC..... 1305-A924
 Weight 3850 gr
 Length.....6.615 in. (168 mm)
 Tracer NA
 Primer NA
 Fuze..... NA
 Explosive:
 Type NA
 Weight NA

In incendiary:

TypeNA
 WeightNA

Propellant:

TypeNA
 Weight.....NA

Performance:

Chamber pressureNA
 VelocityNA

Shipping and Storage Data:

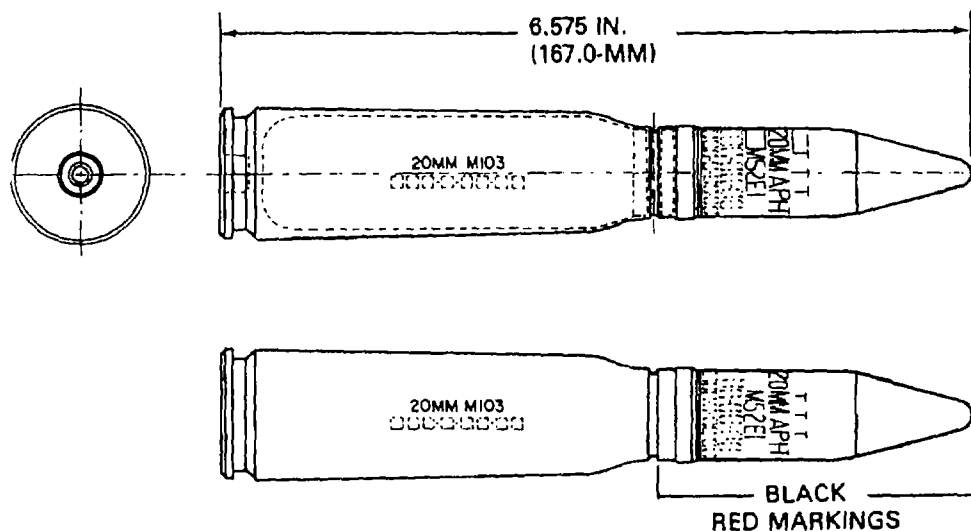
Quantity-distance class/
 SCGNA
 Storage codeNA
 DOT shipping classNA
 DOT designation NONEXPLOSIVE
 AMMUNITION
 Drawing number11075758

References:

SB 700-20
 TM 9-1005-286-10
 TM 9-1300-206

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CARTRIDGE, 20 MM, ARMOR PIERCING INCENDIARY-TRACER, M52R1



U
AR 5977

Type Classification:

STD - OI'CM 37404.

Use:

Guns, 20mm, M39, M61 and M195. The cartridge is used against moderately armed targets and when incendiary effect is needed.

Description:

ARMOR PIERCING INCENDIARY-TRACER Cartridge. The armor piercing shot is the main part of the projectile. The ballsitic cap (ogive) contains an incendiary composition. The cartridge is identified by a projectile painted black with red markings.

Function:

The nose/ogive of the projectile impacts with the target and ruptures, and the incendiary composition ignites upon exposure to the air.

Tabulated Data:

DODAC..... 1305-A870
 Weight3900 gr
 Length.....6.575 in. (167 mm)
 Tracer- R284
 PrimerElectric, M52A3B1
 Fuze NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type 1280
 Weight..... 65 gr

Propellant:

Type WC 870 or WC 872
 Weight..... MBR (585-805)

Performance:

Chamber pressure 60,500 psi
 Velocity 3380 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4G
 Storage code..... Class V
 DOT shipping class A
 DOT designation AMMUNITION
 FOR SMALL
 ARMS WITH
 INCENDIARY
 PROJECTILES
 Drawing number 7259218

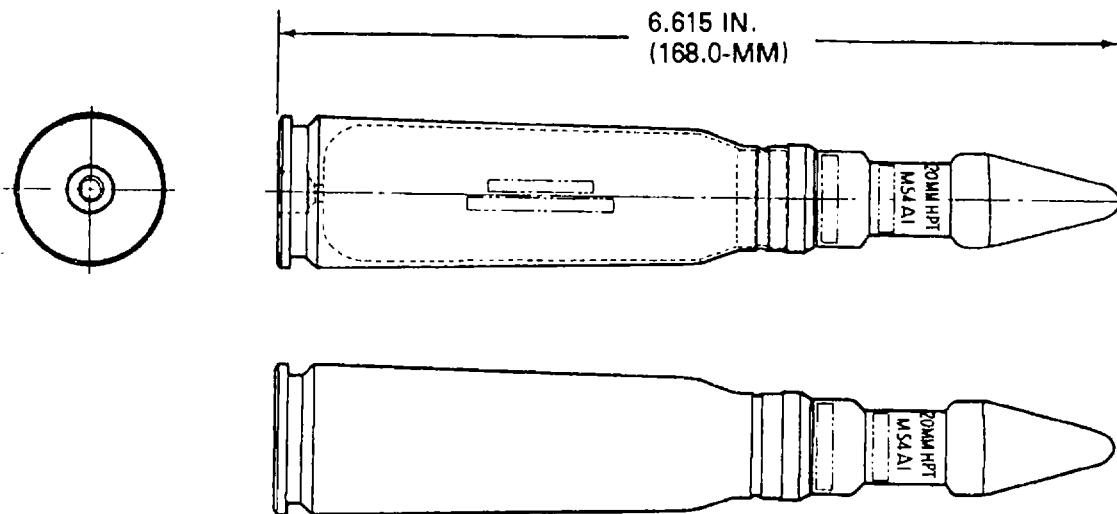
References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 20 MM, BALI,, HIGH PRESSURE TEST, M54A1



U
AR 5979

Type Classification:

STD - AMCTC 6899.

Use:

Guns, Automatic, 20mm, M39 and M61 chambered for the M103 case configuration. The cartridge is used for proof testing of 20mm weapons and barrels during manufacture and repair.

Description:

BALL Cartridge. The cartridge is a solid steel projectile, under cut behind the ogive to control projectile weight, for developing high chamber pressure. The cartridge is identified by a stannic-stained (silvered) cartridge case.

Tabulated Data:

DODAC 1305-A892
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectiles
 Weight 4392 gr
 Length..... 6.615 in. (168 mm)
 Tracer..... NA
 Primer..... Electric, M52A3B1

Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 870 or WC 872
 Weight MBR

Performance:

Chamber pressure..... 62,500 to 72,500 psi (copper)
 Velocity NA

Shipping and Storage Data:

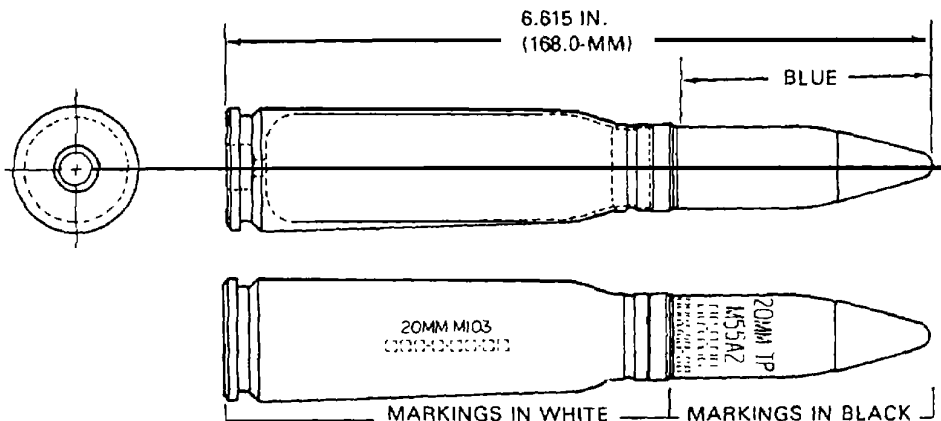
Explosive hazard class..... 1
 Quantity-distance class/
 SCG 1.4C
 Storage code Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7258858

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 20MM, TARGET PRACTICE, M55A2



U
AR 5980

Type Classification:

STD - AMCTC 7741.

Use:

Guns, 20mm, M39, M61 and M68. The cartridge is a training round intended as a substitute for a service round to be used in target practice.

Description:

TARGET PRACTICE Cartridge. The one piece projectile cavity is hollow. The nose (ogive) made of aluminum or steel is swaged to the projectile body. The projectile is painted blue with markings in black. It consists of a solid projectile without a fuze.

Function:

The projectile is inert, therefore no specific function takes place upon impact except penetration of the target.

Tabulated Data:

DODAC..... 1305-A897
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectiles
 Weight 3935 gr
 Length..... 6.615 in. (168 mm)
 Tracer NA

Primer..... Electric, M52A3B1
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 870 or WC 872
 Weight..... MBR (585 or 605 gr)

Performance:

Chamber pressure..... 60,500 psi
 Velocity..... 3380 fps, 78 ft from muzzle

Shipping and Storage Data:

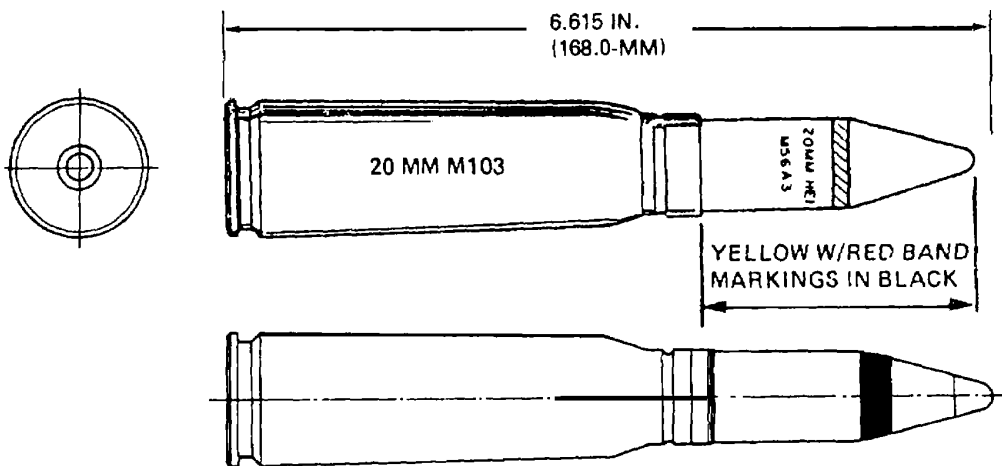
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 7258817

References:

SB 700-20
 TM 9-1005-286-10
 TM 9-1300-206

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CARTRIDGE, 20MM, HIGH EXPLOSIVE INCENDIARY, M56A3/M56A4



U
AR 5981

Type Classification:

M56A3: STD - LCC-B, MSR 03816015.
M56A4: STD - LCC-A, MSR 03816015.

Use:

Guns, 20mm, M39, M61, M168 and M195. The cartridge is for use against ground targets, including lightly armored vehicles, functioning with both explosive and incendiary effect. The projectile consists of a high explosive incendiary (HEI) charge and is assembled with the M505A3 fuze.

Description:

HIGH EXPLOSIVE INCENDIARY Cartridge. The projectile is thin-walled steel. A base plate is attached to the projectile to prevent ignition of the incendiary mixture by the propellant gases. A point-detonating (PD) fuze is screwed into the nose of the projectile.

Function:

The M505A3 fuze is a point-detonating, single-action fuze intended to function upon impact with the target.

Difference Between Models:

The models differ in the method of loading the projectiles. The M56A3 has the HE mix and the incendiary mix combined in one pellet. The M56A4 has the incendiary pellet inserted into the projectile, then the HE mix pellet is added. This improves fire start capability.

Tabulated Data:

DODAC.....	1305-A890
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
Weight	3965 gr
Length.....	6.615 in. (168 mm)
Tracer	NA
Primer.....	Electric, M52A3B1
Fuze.....	PD, M505A3
Explosive:	
Type	H761
Weight.....	165 gr
Incendiary:	
Type	I136
Weight.....	20 gr
Propellant:	
Type	WC 870 or WC 872
Weight.....	MBR (585 or 605 gr)

Performance:

Chamber pressure..... 60,500 psi
Velocity..... 3380 fps, 78 ft from
muzzle

Shipping and Storage Data:

Quantity-distance class/
SCG..... 1.2E (04)
Storage code..... Class V
DOT shipping class A

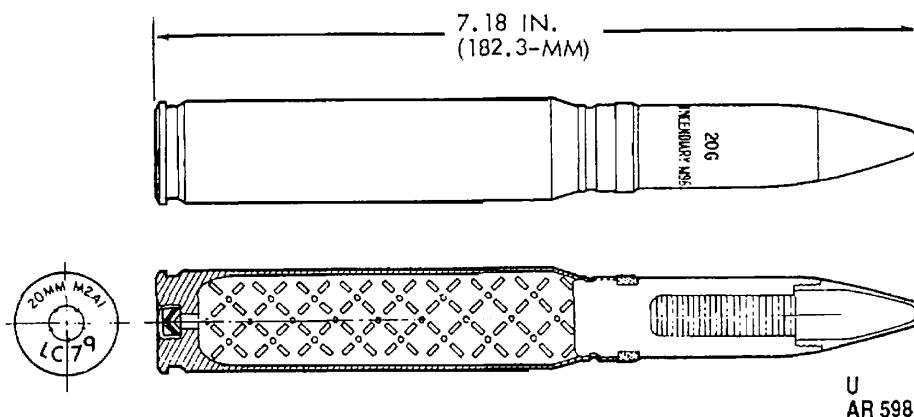
DOT designation AMMUNITION
FOR SMALL
ARMS WITH
EXPLOSIVE
PROJECTILES
Drawing number..... 7259023 (M56A3);
11075861 (M56A4)

References:

DARCOM 700-3-2
SB 700-20
TM 9-1005-286-10
TM 9-1300-206

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CART'RIDGE, 20MM, INCENDIARY, M96



Type Classification:

CON - OTCM 36841.

Use:

Guns, 20mm, M3 and M24A1.

Description:

INCENDIARY Cartridge. The body of the projectile is made from cold dracon steel. The projectile nose and body are filled with incendiary composition.

Function:

Impact with the target by the projectile produces compression of the heat and friction sensitive elements in the incendiary mixture causing ignition of the mixture.

Tabulated Data:

DODAC..... 1305-A776
 UNO serial number 0009
 UNO proper shipping
 name Ammunition,
 incendiary

Weight 3850 gr
 Length..... 7.18 in. (182.3 mm)
 Tracer NA
 Primer..... Percussion
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type I136
 Weight..... 3.92 oz
 Propellant:
 Type 75-1-178A
 Weight..... 470 gr

Performance:

Chamber pressure..... 51,000 psi
 Velocity..... 2680 fps, 78 ft from
 muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.2G
 Storage code..... Class V
 DOT shipping class A

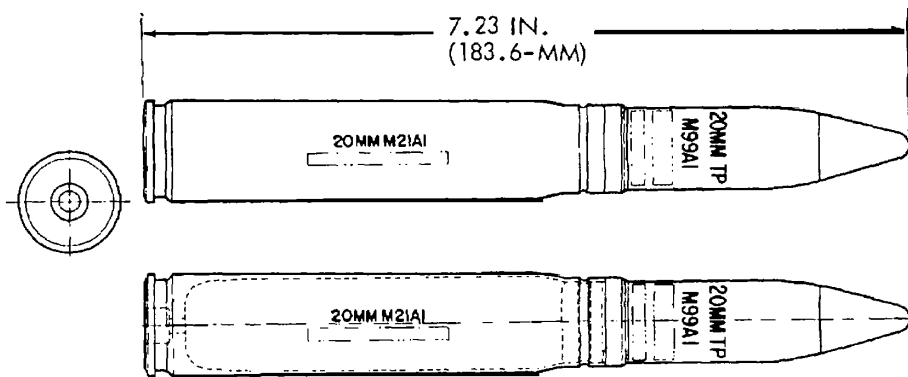
DOT designation AMMUNITION
FOR SMALL
ARMS WITH
INCENDIARY
PROJECTILES
Drawing number 75-1-178

References:

SB 700-20
TM 9-1300-206

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CARTRIDGE, 20MM, TARGET PRACTICE, M99A1



U
AR 5985

Type Classification:

STD - OTCM 37403.

Use:

Gun, 20mm, M24A1. The cartridge is used for training, gun testing, and gull system function tests.

Description:

TARGET PRACTICE Cartridge. The cartridge contains a hollow, inert projectile which has a cavity to control the weight. The aluminum nose is swaged to the body.

Function:

The projectile is inert, therefore no specific function takes place except target penetration.

Tabulated Data:

DODAC..... 1305-A847
 Weight 4000 gr
 Length..... 7.23 in. (183.6 mm)
 Trace NA
 Primer..... Electric, M52A3B1
 Fuze..... NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type IMR 7013 or
 WC 875
 Weight..... 500 gr

Performance:

Chamber pressure..... 51,000 psi
 Velocity..... 2680 fps, 78 ft
 from muzzle

Shipping and Storage Data:

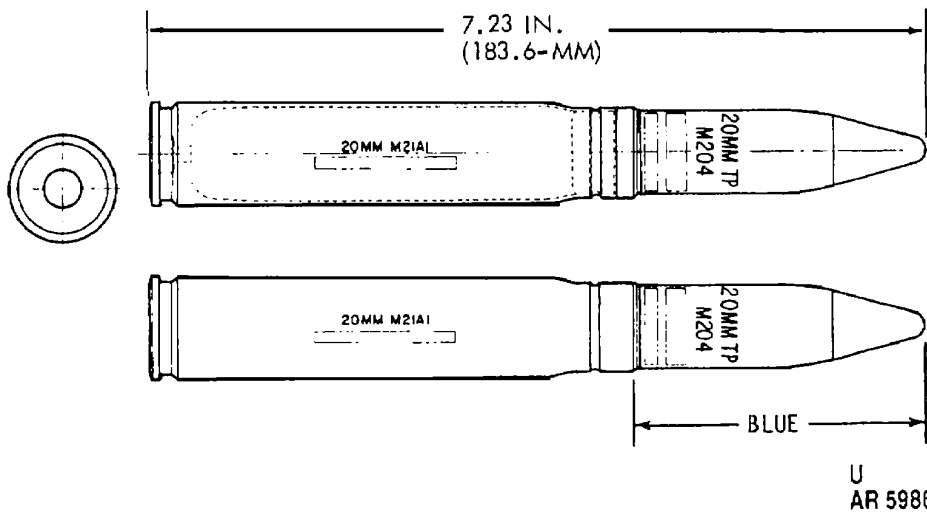
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class..... C
 DOT designation SMALL ARMS
 AMMUNITION
 Drawing number..... 7258849

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 20MM, TARGET PRACTICE, M204



Type Classification:

STD - AMCTC 4762.

Use:

Guns, 20mm, M3 and M24A1. The cartridge with inert projectile is used in training, gun testing, and gun system function testing.

Description:

TARGET PRACTICE Cartridge. The cartridge has a blue painted projectile. The body has a cavity to control the weight and the aluminum nose is swaged to the body.

Function:

No specific function takes place upon impact except target penetration.

Tabulated Data:

DODAC..... 1305-A777
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectiles

Weight 4000 gr
 Length (max)..... 7.23 in. (183.6 mm)
 Tracer NA
 Primer..... Percussion, M36A2
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 875 or
 IMR 7013
 Weight..... MBR

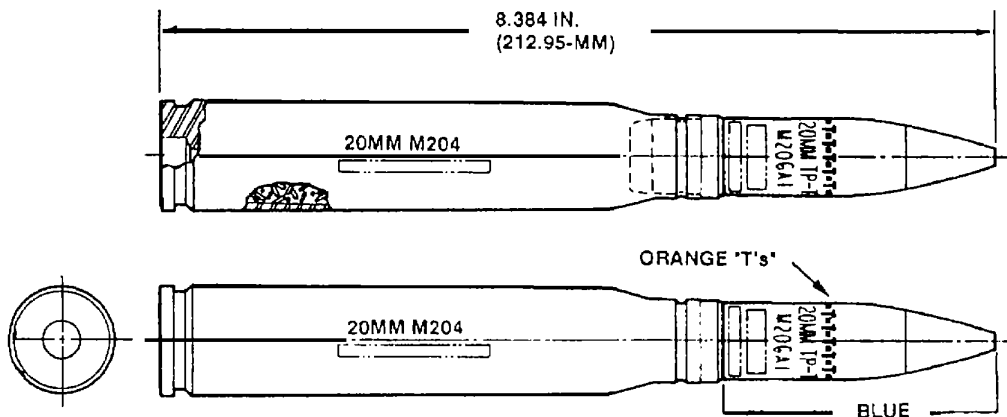
Performance:

Chamber pressure (max)..... 51,000 (copper)
 Velocity..... 2680 fps, 78 ft from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.4C
 Storage Class V

CARTRIDGE, 20MM, TARGET PRACTICE -TRACER, M206A1



U
AR 5987

Type Classification:

STD - AMCTC 4762.

Use:

Gun, 20mm, Automatic, M139. The cartridge is used in training and operation of gun systems with tracer characteristics for visual sighting to target.

Description:

TARGET PRACTICE-TRACER Cartridge. The cartridge has a blue painted projectile body with a row of orange "T's" at the front of the projectile body.

Tabulated Data:

DODAC..... 1305-A790
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectiles
 Weight 4886 gr
 Length..... 8.384 in. (212.95 mm)
 Tracer R284
 Primer..... Percussion, MI15
 Fuze..... NA

Explosive:

Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight..... NA

Propellant:

Type CR 8325
 Weight..... MBR (585-605 gr)

Performance:

Chamber pressure (max)..... 54,000 (copper)
 Velocity 3430 fps, 78 ft from muzzle

Shipping and Storage Data:

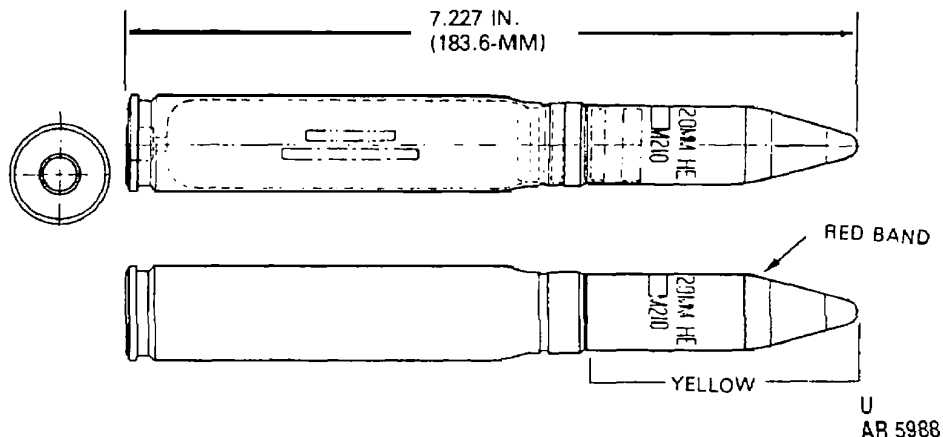
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class C
 DOT designation SMALL ARMS AMMUNITION
 Drawing number..... 10542655

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 20MM, HIGH EXPLOSIVE INCENDIARY, M210



Type Classification:

STD - AMCTC 5433.

Use:

Guns, 20mm, M3 and M24A1. The projectile is effective against aircraft and other targets that are not heavily armored.

Description:

HIGH EXPLOSIVE INCENDIARY Cartridge. The cartridge has a yellow painted projectile body with a red band, approximately 1/4 inch wide, at forward end. The projectile has a steel body with a cavity filled with RDX and aluminum and a point-detonating (PD) bore-safe fuze.

Function:

The projectile fuze arms in flight. Upon impact, the fuze detonates the projectile causing fragmentation of the body with an incendiary effect.

Tabulated Data:

DODAC..... 1305-A863
 UNO serial number 0009
 UNO proper shipping
 name Ammunition,
 incendiary

Weight (approx) 4000 gr
 Length (max)..... 7.227 in.
 (183.6 mm)
 Tracer NA
 Primer..... Percussion, M36A2
 Fuze..... PD, M505A3
 Explosive:
 Type H761
 Weight..... 120 gr
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 875 or
 IMR 7013
 Weight..... MBR

Performance:

Chamber pressure (max)..... 51,000 psi (copper)
 Velocity 2680 ± 50 fps, 78 ft
 from muzzle

Shipping and Storage Data:

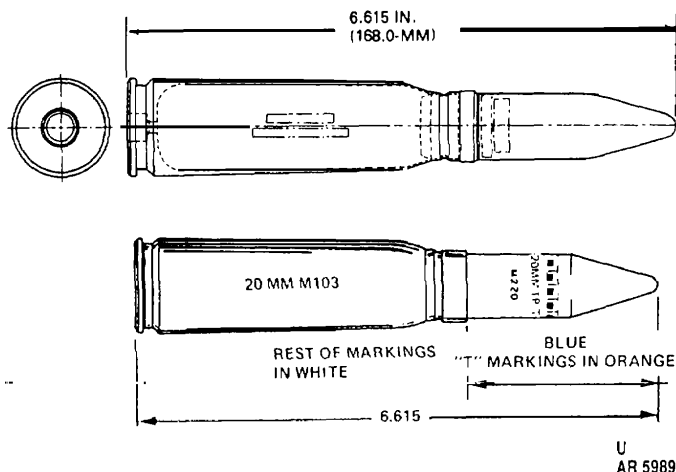
Quantity-distance class/
 SCG..... 1.2E (0.4)
 Storage code..... Class V
 DOT shipping class A

DOT designation AMMUNITION
FOR SMALL
ARMS WITH
EXPLOSIVE
PROJECTILES
Drawing number 7259105

References:

SB 700-20
TM 9-1300-206

CARTRIDGE, 20MM, TARGET PRACTICE-TRACER, M220



Type Classification:

STD - AMCTC 7404.

Use:

Guns, 20mm, M39, M61 and M168. The cartridge is for practice and training.

Description:

TARGET PRACTICE-TRACER Cartridge. The cartridge is ballistically and physically identical to the M55A2 cartridge except that a tracer element has been added to the base of the projectile. The projectile is painted blue with orange colored markings.

Function:

The projectile is similar to the M56A3 projectile, but has no high explosive incendiary charge and is assembled with a dummy fuze. The projectile does contain a tracer composition which burns visibly for a minimum of 1.9 seconds.

Tabulated Data:

DODAC..... 1305-A651
 UNO serial number 0339
 UNO proper shipping name..... Cartridges for weapons, inert projectiles
 Weight 3935 gr
 Length..... 6.615 in. (168 mm)

Tracer R505 or R403
 Primer Electric
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 870 or WC 872
 Weight..... MBR (585-605 gr)

Performance:

Chamber pressure..... 61,500 psi
 Velocity 3380 fps, 78 ft from muzzle

Shipping and Storage Data:

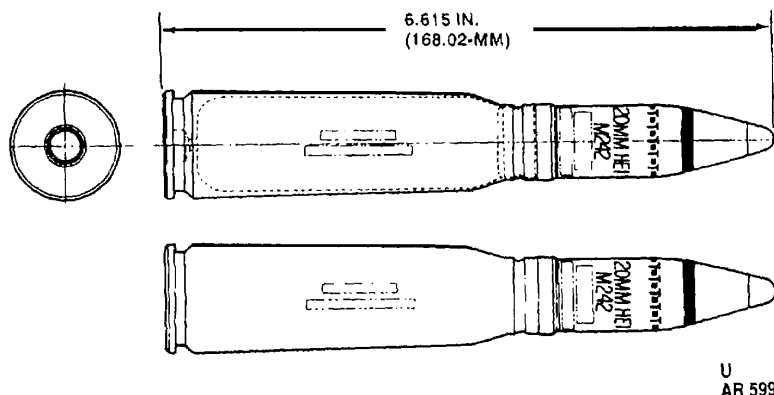
Quantity-distance class/
 SCG..... 1.4C
 Storage code..... Class V
 DOT shipping class A
 DOT designation SMALL ARMS AMMUNITION
 Drawing number 7259146

References:

SB 700-20
 TM 9-1005-286-10
 TM 9-1300-206

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CARTRIDGE, 20MM, HIGH EXPLOSIVE INCENDIARY-TRACER, M242/M242A1



Type Classification:

M242: STD - AMCTC 6445.
 M242A1: No Army requirement.

Use:

Guns, 20mm, M39 and M61.

Description:

HIGH EXPLOSIVE INCENDIARY-TRACER
 Cartridge. The cartridge has the same basic structure as the M56A3 cartridge with the addition of a tracer element.

Function:

The projectile has the same function as the M56A3 high explosive incendiary (HEI) cartridge projectile. The tracer is ignited by the propellant when the round is fired.

Difference Between Models:

The models differ in the method of loading the projectiles. The M242 has the HE mix and the incendiary mix combined in one pellet with the tracer mix added at the base of the projectile. The M242A1 projectile has the incendiary loaded as a separate pellet and the HE mix is also loaded as a separate pellet, then the tracer pellet is added. This improves fire start capability.

Tabulated Data:

DODAC.....	1305-A659
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
Weight	3865 gr
Length.....	6.615 in. (168.02 mm)
Tracer	R505
Primer.....	Electric, M52A3B1
Fuze.....	PD, M505A3
Explosive:	
Type	H7G1
Weight.....	1455 gr
Incendiary:	
Type	I136
Weight.....	20 gr
Propellant:	
Type	WC 870 or WC 872
Weight.....	MBR (585 or 605 gr)

Performance:

Chamber pressure.....	60,500 psi
Velocity	3380 fps, 78 ft from muzzle

Shipping and Storage Data:

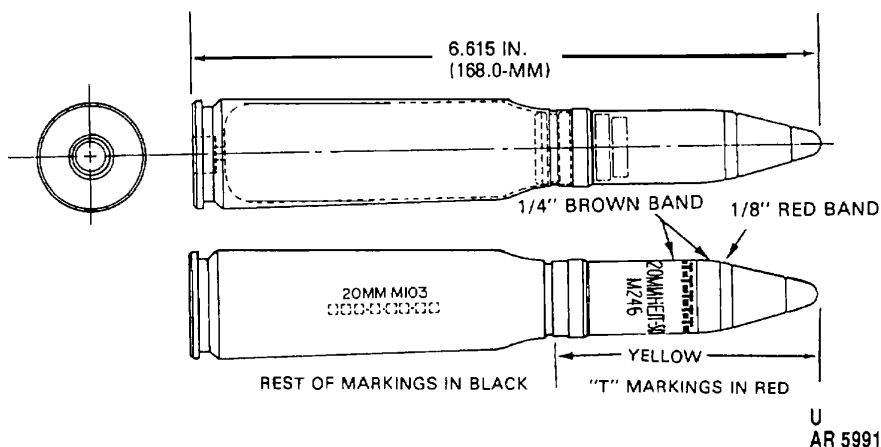
Quantity-distance class/ SCG.....	1.2E (0.4)
Storage code.....	Class V
DOT shipping class	A

DOT designation SMALL ARMS
AMMUNITION
WITH
EXPLOSIVE
PROJECTILES
Drawing number 7259268 (M242);
9341740 (M242A1)

References:

SB 700-20
TM 9-1300-206

CARTRIDGE, 20MM, HIGH EXPOSIVE INCENDIARY-TRACER, SELF-DESTROYING, M246/M246A1



Type Classification:

M246: STD - LCC-B MSR 03816015.
 M246A1: STD - LCC-A MSR 03816015.

Use:

Gun, 20mm, M168. The cartridge is for use against aerial targets.

Description:

HIGH EXPOSIVE INCENDIARY-TRACER, SELF-DESTROYING Cartridge.

Function:

The cartridge is assembled with an M505A3 point-detonating (PD) fuze. The projectile, in addition to the M505A3 fuze, consists of a high explosive incendiary (HEI) charge, self-destroying (SD) relay charge, and a tracer charge. These charges form the SD chain. The tracer burns for about 3 to 7 seconds, whereupon the relay charge is ignited which detonates the HEI charge low order. If impact with target occurs prior to self-destruction, the M505A3 fuze causes the HEI charge to detonate high order.

Difference Between Models:

The basic difference between the models is in the loading of the projectiles. In the M246 projectile, the

incendiary mix and the HE mix are combined in one pellet. In the M246A1 projectile, the incendiary is loaded as a separate pellet. The HE mix is also loaded as a separate pellet along with the SD relay charge pellet and the tracer charge pellet. This improves fire start capability.

Tabulated Data:

DODAC:	
M246	1305-A791
M246A1	1305-A792
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
Weight	4070 gr
Length	6.615 in. (168 mm)
Tracer	R505
Primer	Electric, M52A3B1
Fuze	PD, M505A3
Explosive:	
Type	H761
Weight	115 gr
Incendiary:	
Type	NA
Weight	NA
Propellant:	
Type	WC 870
Weight	MBR (585-605 gr)

Performance:

Chamber pressure..... 60,500 psi
Velocity..... 3380 fps, 50 ft
from muzzle

Shipping and Storage Data:

Quantity-distance class/
SCG..... 1.2E (0.4)
Storage code..... Class V
DOT shipping class A

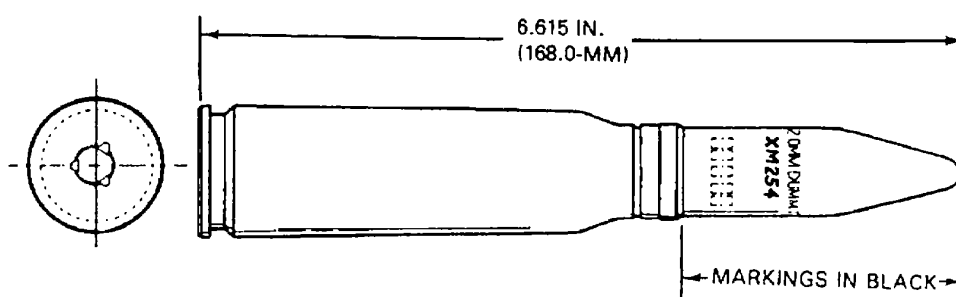
DOT designation AMMUNITION
FOR SMALL
EXPLOSIVE
PROJECTILES

Drawing number:
M246 10542384
M246A1 9333764

References:

SB 700-20
TM 9-1005-286-10
TM 9-1300-206

CARTRIDGE, DUMMY, 20MM, XM254



U
AR 5992

Type Classification:

Not applicable.

Use:

Guns, 20mm, M39, M61, M139, M168, M195 and XM197. The cartridge is for training of crews. The plastic material, instead of steel, reduces wear on gull components and fire mechanisms.

Description:

DUMMY Cartridge. The cartridge is of plastic construction.

Tabulated Data:

DODAC..... 1305-A895
 Weight 3850 gr
 Length..... 6.615 in. (168 mm)
 Tracer NA
 Primer..... NA
 Fuze..... NA
 Explosive:
 Type NA
 Weight..... NA

Incendiary:

Type NA
 Weight NA

Propellant:

Type NA
 Weight NA

Performance:

Chamber pressure..... NA
 Velocity..... NA

Shipping and Storage Data:

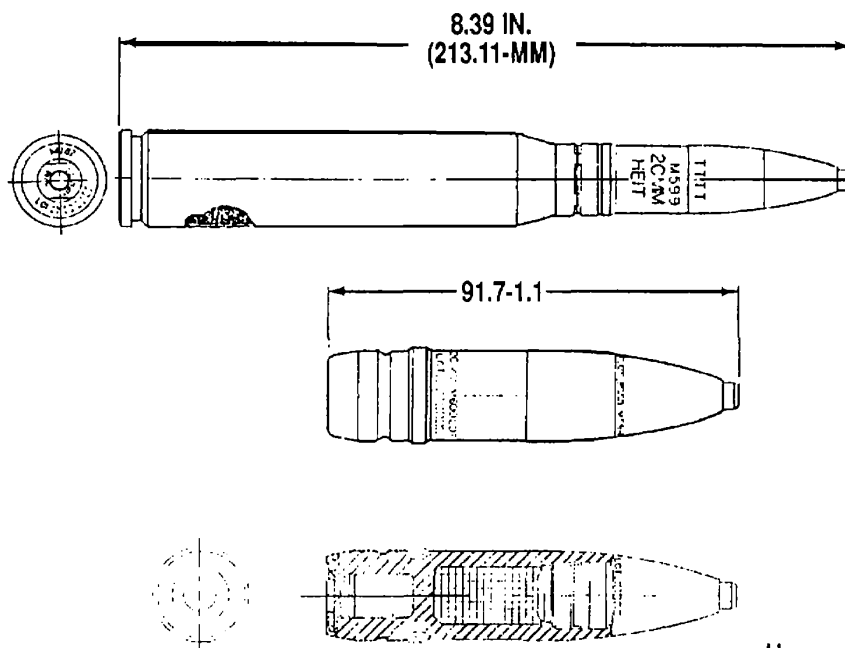
Quantity-distance class/
 SCG..... NA
 Storage code..... NA
 DOT shipping class NA
 DOT designation NA
 Drawing number 7259254

References:

SB 700-20
 TM 9-1005-246-24
 TM 9-1005-286-10
 TM 9-1300-206

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**CARTRIDGE, 20MM, HIGH EXPLOSIVE INCENDIARY-TRACER,
M599 FUZE POINT-DETONATING SELF-DESTROYING M594**



U
AR 5993

Type Classification:

STD - AMCTC 6391.

Use:

Gun, M139.

Description:

HIGH EXPLOSIVE INCENDIARY-TRACER
Cartridge. The cartridge has a point-detonating (PD) self-destroying (SD) fuze M594. The projectile is a hollow body filled with 120 grams of high explosive incendiary (HEI) mixture with a tracer tablet at the base and the PD SD fuze screwed onto the nose.

Function:

When fired, the weapon firing pin initiates the primer which ignites the propelling charge. Gases produced by the burning propellant propel the projectile. The projectile shall function with high order detonation upon impact or, if the projectile does not impact on intended

target within 4 to 7 seconds, a SD mechanism will cause high order detonation of the projectile.

Tabulated Data:

DODAC.....	1305-A787
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
Type.....	HEI-T
Weight (approx)	317 g
Length.....	8.39 in. (213.11 mm)
Projectile (steel):	
Tracer	Tablet, 1.17 g
Explosive (HEI mix)	120 g
Fuze.....	PD SD, M594, aluminum
Color	Yellow with red "T" band, black markings
Cartridge case.....	Steel, M187
Propellant.....	VTL-1375-502-52 g
Primer percussion	M103

Performance:

Chamber pressure..... 49,500 psi
 Velocity..... 3460 fps, 78 ft
 from muzzle

Shipping and Storage Data:

Quantity-distance class/
 SCG..... 1.2E
 Storage code..... Class IV
 DOT shipping class A
 DOT designation SMALL ARMS
 AMMUNITION
 WITH
 EXPLOSIVE
 PROJECTILE

M528 shipping and storage container:

Material..... Steel
 Dimensions..... 14-9/16 x 9-39/64 x
 4-5/16 in.
 Cube..... 0.35 cu ft
 Drawing number C/R..... 10535815

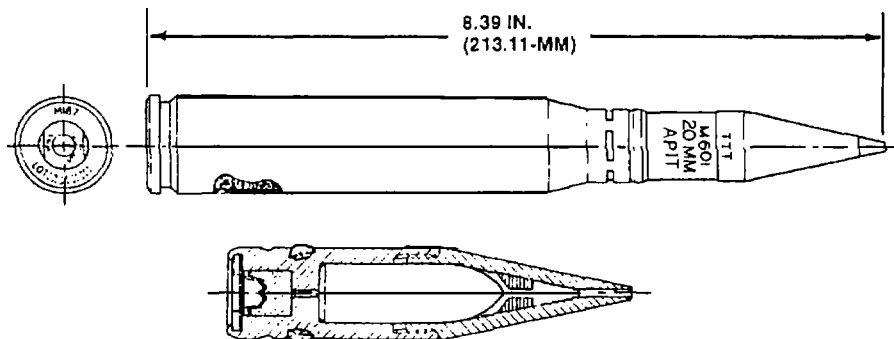
Packing:

25 cartridges, 20mm linked with M601 armor
 piercing incendiary-tracer, cartridges in ratio with 3
 M599 to 2 M601 in shipping and storage containers
 M528. Two shipping and storage containers (50
 cartridges) in a wire-bound box.

References:

DARCOM 700-3-2
 TM 9-1300-206

CARTRIDGE, 20MM, ARMOR PIERCING INCENDIARY-TRACER, M601



U
AR 5994

Type Classification:

STD - AMCTC 4762.

Use:

Gun, M139.

Description:

ARMOR PIERCING INCENDIARY-TRACER
Cartridge. The tungsten-carbide core is the main part of the projectile, and is the penetrator. The ballistic cap (ogive) contains an incendiary pellet. A tracer tablet is at the base of the projectile. The projectile body is painted black with white markings and with red painted "T's" encircle the ogive (signifying tracer).

Function:

When fired, the weapon firing pin initiates the primer which ignites the propelling charge. Gases produced by the burning propellant propel the projectile. Upon impact with the target, the nose (ogive) ruptures and the incendiary composition ignites on exposure to the air.

Tabulated Data:

Complete round:	
UNO serial number	0009
UNO proper shipping name	Ammunition, incendiary
DODAC.....	1305-A786
Type.....	API-T
Weight.....	310 g
Length.....	8.39 in. (213.112 mm)
Cannon used with.....	M139
Projectile (111 g):	
Penetrator (core)	Tungsten-carbide
Body	Aluminum alloy, 22.5 g
Windshield	Aluminum, 9.4 g
Incendiary	XM71 pellet, 0.45 g
Tracer	Tablet, 1.17 g
Fuze.....	NA
Color	Black with white marking with "T" red bound
Cartridge case.....	Steel, M187
Propellant (VTL 1375-502):	
Weight (approx)	53 g
Primer (percussion).....	M103

Performance:

Chamber pressure..... 49,500 psi
Velocity..... 3610 fps, 78 ft
from muzzle

Shipping and Storage Data:

Quantity-distance class/
SCG..... 1.4G
Storage code..... Class IV
DOT shipping class..... A
DOT designation..... SMALL ARMS
AMMUNITION
WITH
INCENDIARY
PROJECTILE

M528 shipping and storage container:

Material..... Steel
Dimensions..... 14-9/16 x 9-39/64 x
4-5/16 in.
Cube..... 0.35 cu ft
Drawing number C/R..... 10535805

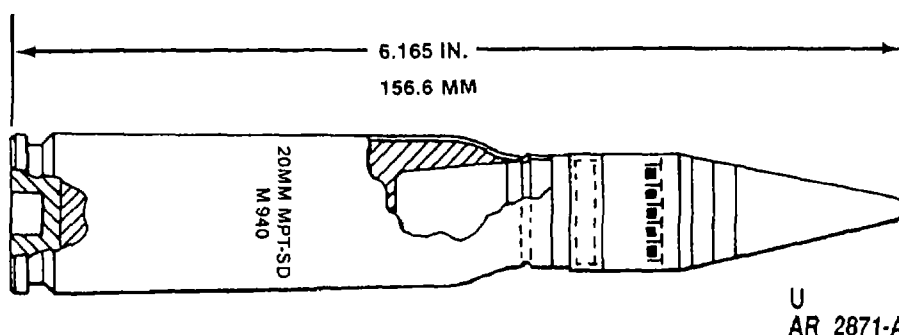
Packing:

25 cartridges, 20mm linked with M599 high explosive incendiary-tracer cartridges in a ratio of 3 M599 to 2 M601 in shipping and storage container M528. Two containers in a wrap-around crate.

References:

DARCOM 700-3-2
TM 9-1300-206

CARTRIDGE, 20MM, MULTIPURPOSE TRACE SELF-DESTROYING, M940



Type Classification:

TC STD A - Approved March 13, 1989.

Use:

The existing Vulcan Air Defense System (VADS) and Product Improved Vulcan Air Defense System (PIVADS) M246 ammunition is incapable of providing defense against the modern enemy threat at combat ranges greater than 1,600 meters because of inherent performance limitations including poor flight characteristics, self-destroying ranges, and terminal effectiveness. Therefore, the Army decided to pursue acquiring a new round of ammunition for VADS/PIVADS which would exhibit better exterior ballistics and greater lethality than the existing M246 High Explosive Incendiary Tracer Self-Destroying (HEI-T-SD) ammunition.

Description:

MULTIPURPOSE TRACE SELF-DESTROYING Cartridge. The cartridge is an improved fuzeless pyrotechnic initiated 20mm HE cartridge. The projectile consists of a heavy walled steel body charged with explosive mix and an incendiary mix, and an aluminum nose charged with another incendiary mix. The projectile also has safe and arming (S&A), tracer, and self-destroying which is initiated by heat from combustion of the tracer composition. The lack of fuze permits an enhanced aerodynamic ogive shape which results in a reduction in drag factor and reduced time of flight, thereby extending the effectiveness of the VADS from 1,200 meters to 2,000 meters against aircraft targets. The M940 will replace the 20mm M246 HEI-T-

SD as the primary air defense cartridge for the VADS and any of its improved versions.

Function:

The projectile consists of a steel body charged with a HE mix, Composition A-4 (MILC-440), and an incendiary mix, Type I (equivalent I-68). The projectile has an aluminum nose charged with Type II incendiary (equivalent I-136). The hardened forebody of the projectile provides for defeat of lightweight armor (3/8 RHA at well over 500 m). The incendiaries provide a built-in delay when initiated on the thin skin of an aircraft, and the projectile explodes approximately 1 foot behind the skin. The M94 cartridge, therefore, is primarily intended for air defense but has a secondary roll against light armored vehicles. The M940 contains a chemical S&A intended to reduce the probability of functioning on a 0.04 aluminum plate at 1 meter from the muzzle. When initiated, all projectile fragments go forward.

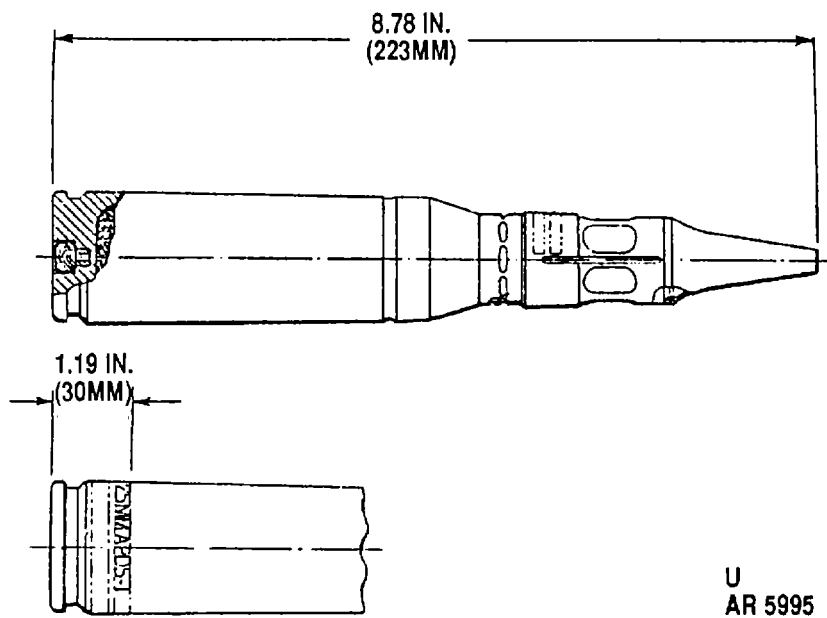
Tabulated Data:

Complete round:	
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
DODAC	1305-A710
Type	MPT-SD
Weight	264 g
Length (max)	6.165 in. (156.6 mm)
Cannon used with	M168

CHAPTER 15
25MM CARTRIDGES

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CARTRIDGE, 25MM, ARMOR PIERCING DISCARDING SABOT-TRACER, M791



Type Classification:

STD - MSR 12796010.

Use:

Automatic cannon, 25mm, M242.

Description:

ARMOR PIERCING DISCARDING SABOT-TRACER Cartridge. The cartridge is a fixed type, percussion primed 25mm ammunition, intended as the armor piercing service round to successfully engage lightly armored vehicles. The cartridge consists of a sabot encapsulated projectile body, crimped to a steel cartridge case containing 98 grams of extruded propellant, M115 percussion primer and booster pellet. The projectile body consists of a solid tungsten alloy penetrator, pressed on aluminum windshield, pressed-in tracer pellets, molded discarding-type nylon sabot, staked aluminum base and pressed-on polyethylene nose cap.

Function:

When fired, the weapon firing pin initiates the primer which ignites the propelling charge. Gases produced by the burning propellant propel the projectile from the cannon and ignite the tracer. Setback, centrifugal and air pressure forces cause the sabot to discard upon leaving the gun tube. The penetrator (core) is spin stabilized and penetrates the target solely by kinetic energy.

Tabulated Data:

Complete round:	
DODAC	1305-A974
UNO serial number	0339
UNO proper shipping name	Cartridges for weapons, inert projectile
Type	APDS-T
Weight	458 ± 15 g
Length	8.78 in. (223 mm)
Cannon used with	M242
Projectile:	
Penetrator (core)	Tungsten-alloy
Sabot	Nylon, aluminum base
Nose cap	Polyethylene
Tracer	NA
Explosive	NA
Fuze	NA
Color	Black with white markings
Cartridge case	C1030 steel
Propellant:	
Type	Radford AP225
Weight	0.221 lb
Primer percussion	M115

Performance:

Chamber pressure	56,000 psi
Range	15,000 m
Muzzle velocity	1330 mps, 4370 fps

Shipping and Storage Data:

Quantity-distance class/
SCG 1.4C
Storage code Class IV
DOT shipping class A
DOT designation AMMUNITION
FOR CANNON
WITH SOLID
PROJECTILE

M621 shipping and storage:
Material..... Polypropelene
plastic
Weight (tactically
packed) 47.7 lb
Weight (empty) 7.94 lb

Dimensions 13.8 x 13.8 x 5.5 in.
Drawing number C/R..... 12013533

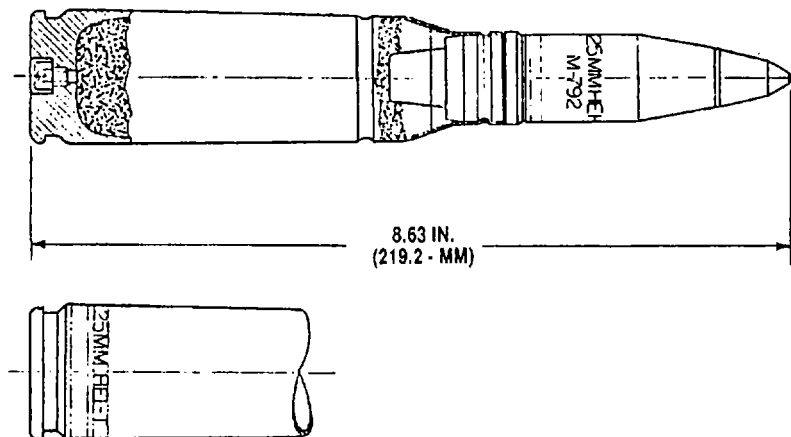
Packing:

Tactical packing unit 30 linked cartridge in two 15-round belts packed nose-to-nose with two plastic separators in plastic shipping and storage container M621.

References:

DARCOM 700-3-2
TM 9-1300-206

**CARTRIDGE, 25MM, HIGH EXPLOSIVE INCENDIARY-TRACER, M792
WITH FUZE POINT-DETONATING SELF-DESTROYING M758**



U
AR 5998

Type Classification:

STD - MSR 12796010.

Use:

Automatic cannon, 25mm, M242.

Description:

HIGH EXPLOSIVE INCENDIARY-TRACER
Cartridge. The cartridge is a fixed type, percussion primed 25mm munition, intended as the high explosive service round to successfully engage unarmored ground targets. The cartridge consists of a high explosive incendiary (HEI) filled, one piece projectile body that is crimped to a steel cartridge case containing 90 grams of ball propellant, M115 percussion primer and booster pellet. The projectile body consists of a hollow C1045 steel body, screwed on M758 fuze, swaged iron rotating band, 32 grams of H761 HEI mix and pressed-in tracer pellets. Projectile length, including tracer boom, varies by manufacturer from 3.94 to 4.66 inches.

Function:

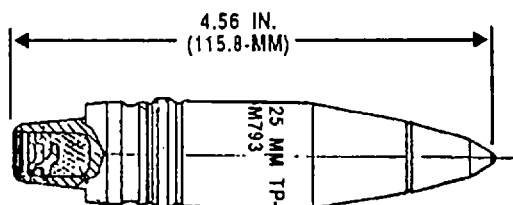
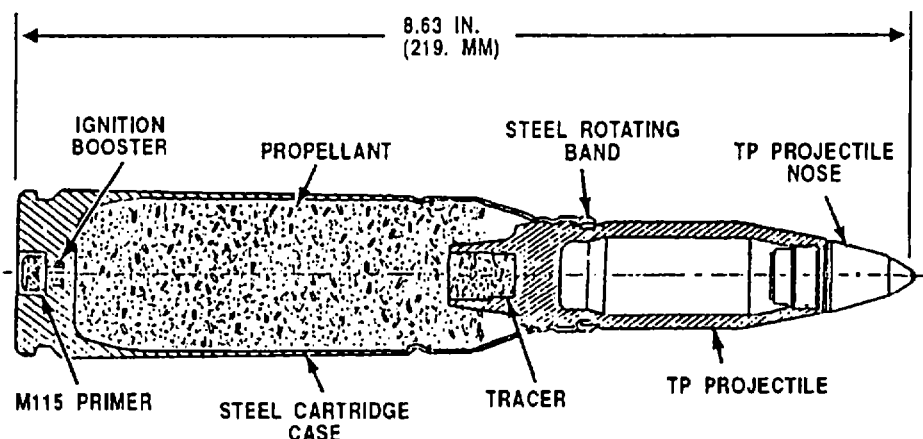
When fired, the primer is mechanically initiated by the weapon firing pin. The primer output ignites the booster pellet which, in turn, ignites the propellant charge. The projectile is launched at a velocity of 1100 meters per second, achieving a maximum effective

range of 3000 meters. Upon impact, the fuze functions and the HEI filler detonates dispersing the incendiary mixture. The self-destroying requirement is 6.2 seconds per minute and prior to impact.

Tabulated Data:

Complete round:	
DODAC	1305-A975
UNO serial number	0321
UNO proper shipping name	Cartridges for weapons, with bursting charge
Type	HEI-T
Weight	1.11 lb
Length	8.63 in. (219.2 mm)
Projectile:	
Body	Steel, C1045
Tracer	Pellet
Explosive (HEI mix)	4761, 32 g
Fuze	PD SD, M758
Color.....	Yellow with red band and black markings
Cartridge case	Steel, C1030
Propellant:	
Type	WC 890
Weight.....	90 g
Primer percussion	M115

CARTRIDGE, 25MM, TARGET PRACTICE-TRACER, M793



U
AR 5999

Type Classification:

STD - MSR 12796010.

Use:

Automatic cannon, 25mm, M242.

Description:

TARGET PRACTICE-TRACER Cartridge. The cartridge is a fixed type, percussion primed 25mm munition, intended as a substitute for the high explosive incendiary with tracer service round for target practice in training, gun testing, and gun system functioning. The cartridge consists of a hollow, two piece projectile body that is crimped to a steel cartridge case containing 90 grams of ball propellant, M115 percussion primer and booster pellet. The projectile body consists of a hollow C1035 steel body screw-on steel nose piece, swaged iron rotating even band and pressed-in tracer pellets.

Function:

The cartridge functions the same as the M792, except upon impact the projectile is inert.

Tabulated Data:

Complete round:

DODAC 1305-A976
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile

Type TP-T
 Weight 1.11 lb
 Length 8.63 in. (219 mm)

Projectile:

Body Steel, C1035/12/14
 Tracer Pellet
 Explosive NA
 Fuze NA
 Color Blue with white markings
 Cartridge case C1030

Propellant:

Type WC 890
 Weight 0.3 lb
 Primer percussion M115

Performance:

Range 6000 m, 196858E
Muzzle velocity 3609 fps, 78 ft from
muzzle

Shipping and Storage Data:

Quantity-distance class/
SCG 1.4C
Storage code 11 B
DOT shipping class Class B
DOT designation AMMUNITION
FOR CANNON

WITH EMPTY
PROJECTILE

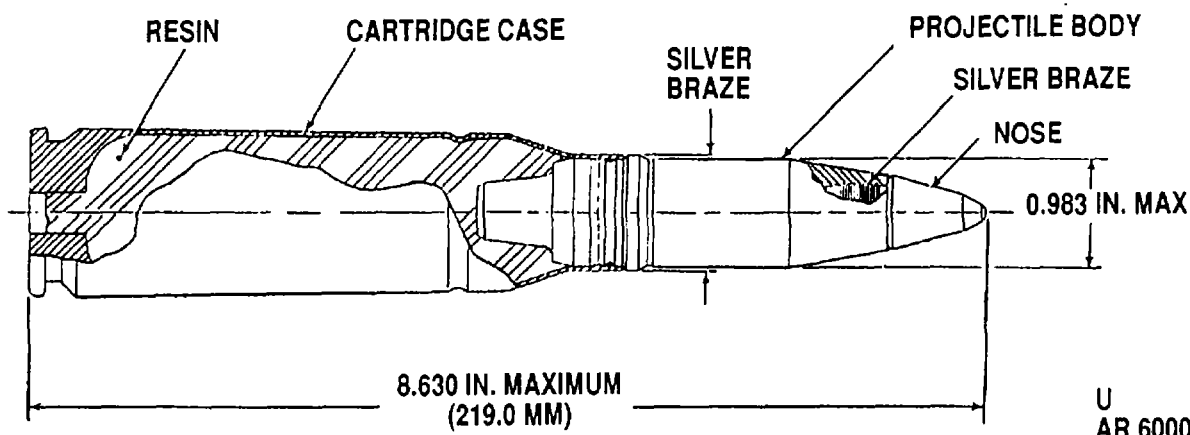
Packing:

Tactical packing unit 30 linked cartridge in two 15-
round belts packed nose-to-nose with two plastic
separators in plastic shipping and storage container
M621.

References:

DARCOM 700-3-2
TM 9-1300-206

CARTRIDGE, 25MM, DUMMY, M794



Type Classification:

STD - DA Letter December 1981.

Use:

Automatic cannon, 25mm, M242. The cartridge is used for non-firing system checkout for the 25mm automatic cannon M242 and training of the crew.

Description:

DUMMY Cartridge. The cartridge is a modified M793 target practice with tracer (TP-T) projectile silver brazed to a modified standard cartridge case and is completely inert. The cartridge case cavity is filled through an enlarged primer hole with an epoxy resin filler to approximate the weight of the M792 high explosive incendiary-tracer and M793 TP-T service cartridges. The threaded nose of the TP-T projectile is silver brazed to the projectile body to improve physical integrity. The external configuration of the M794 metal dummy cartridge (by use of standard components) is the same as that of the M792 HEI-T and M793 TP-T service cartridges.

Tabulated Data:

Complete round:
 DODAC 1305-A967
 Type Dummy, inert
 Weight (w/o link) 1.11 lb
 Length 8.63 in. (219 mm)
 Projectile:

Body Steel, C1035
 Tracer NA
 Explosive NA
 Fuze NA
 Color Silver braze
 Cartridge case Steel, C1030
 Propellant:
 Filler Epoxy resin
 (polyurethane)
 Primer NA

Performance:

Chamber pressure NA
 Velocity NA

Shipping and Storage Data:

Quantity-distance class/
 SCG NA
 Storage code NA
 DOT shipping class NA
 DOT designation NONEXPLOSIVE
 AMMUNITION
 M621 shipping and storage container:
 Material Polypropelene
 plastic
 Length (max) 14.3 in.
 Width (max) 13.8 in.
 Height (max) 5.7 in.
 Packaged weight (30
 linked rounds) 47.7 lb

Wooden box:

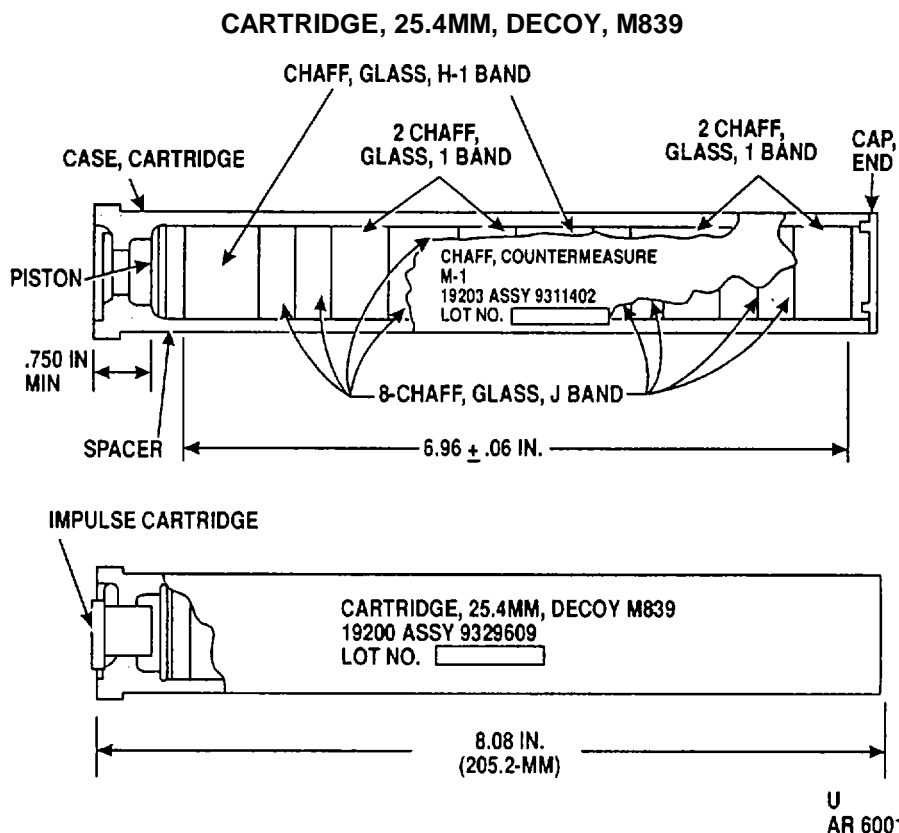
Length 32.5 in.
Width 11.5 in.
Height 12 in.
Weight:
 Packed (40 rounds
 with link) 85.3 lb
 Packed (80 rounds
 without link) 119 lb
Drawing number 12013880

Packing:

Packing consists of 30 linked cartridges in two 15-round belts in M621 plastic shipping and storage containers, or Packing consists of 50 linked cartridges in a wooden shipping and storage container, or Packing consists of 80 tubed cartridges in a wooden shipping and storage container.

References:

DARCOM 700-3-2



Type Classification:

STD - MSR 02816005.

Use:

The cartridge is a decoy to provide an effective survival counter-measure for Army aircraft against radar controlled weapon systems.

Description:

DECOY Cartridge. The cartridge is ammunition item consisting of a plastic outer case nominally 1-inch wide x 1-inch high x 8-inches long, a payload made up of approximately 390,000 strands of aluminum coated glass fibers. The payload is sectioned into several bundles of chaff dipoles. There are three different lengths of bundles in the payload. In addition, the item contains a plastic end cap, plastic piston, felt spacer, and impulse cartridge.

Function:

The cartridge is fired by electrical initiation of the impulse cartridge M796. The gases generated by the functioned impulse cartridge causes the piston to expel the chaff payload into the air where it blooms into a

radar reflecting cloud that breaks "Lock On" by radar-controlled weapon systems.

Tabulated Data:

Complete round:	
DODAC	1305-A965
UNO serial number	0454
UNO proper shipping name	Igniters
Type	Decoy
Weight	0.34 lb
Length	8.08 in. (205.2 mm)
Body	Plastic
Explosive	NA
Fuze	NA
Color	Unpainted
Drawing number	9329609
Specification number	MIL-C-63338(AR)
Payload:	
Chaff	Aluminum coated glass rods
Weight	0.26 lb
Expelling charge:	
Type	Hercules bulls eye smokeless powder
Weight	0.013 oz
Impulse cartridge	M796

Shipping and Storage Data:

Quantity-distance class/

SCG 1.4S
DOT shipping class C
DOT designation ELECTRIC
SQUIB, CLASS C
EXPLOSIVE,
HANDLE
CAREFULLY

Packing box:

Weight 67 lb
Dimensions 14.25 x 13.27 x
12.8 in.

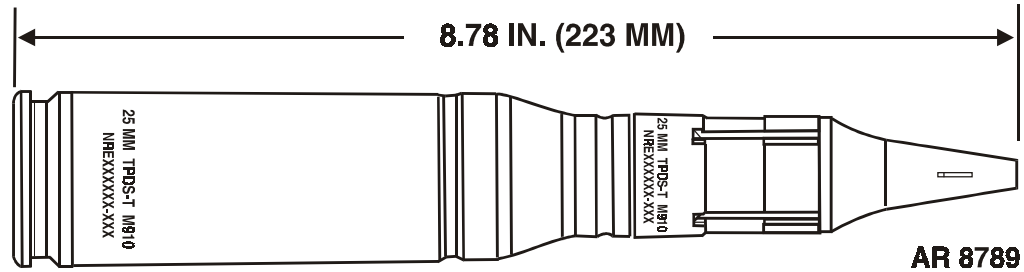
Packing:

Two PA19 metal containers containing 50 decoy cartridges each (width-size) in wood box.

References:

TM 9-1300-206

CARTRIDGE, 25MM, TARGET PRACTICE DISCARDING SABOT-TARGET, M910



Type Classification:

Standard.

Use:

Automatic cannon, 25mm, M242.

Description:

The M910 25mm cartridge is a fixed type, percussion-primed round of ammunition approximately 8 3/4 inches in length and slightly less than a pound in weight. Two contractors currently manufacture the cartridge to a performance specification, Alliant Techsystems and Primex Technologies. Their components are similar but not identical. The projectile consists of a steel core and a windstorm. The Alliant windscreen takes the form of an aluminum nose pressed onto the core. The Primex windscreen is formed from steel sheet and snapped into an annular groove on the core. At the rear of the core is a cavity containing a consolidated trace. The complete projectile assembly includes a discardable aluminum pusher base, is encapsulated with a discarding nylon sabot, and has a polyethylene protective cap. A steel cartridge case is crimped to the projectile assembly. The cartridge case contains the percussion primer staked in place behind an ignition booster pellet. The Alliant cartridge case contains a single-base multiperforated cylindrical propellant, and the Primex case contains a double-base ball propellant.

Function:

The M910 cartridge is a training round which provides a shorter range when fired in place of a 25mm armor-piercing combat round. Its function is initiated when the primer is struck by the firing pin. The booster pellet is initiated from the primer and in turn initiates the propel-

lant. The burning propellant produces high-pressure gases which expel the projectile assembly from the case and through the weapon barrel, and also ignite the trace. Spin is produced by the engagement of the rotating band integral to the sabot with the rifling in the barrel. As the projectile leaves the barrel the spin and aerodynamic forces act to separate the sabot, base and protective cap from it. As the projectile continues towards the target the mass of the trace gases decreases base drag. This, coupled with the high initial velocity, allows the projectile to match the trajectory of the service round to a range of 2000 meters. Upon tracer burnout the large area of the projectile compared to its weight causes it to lose velocity rapidly. The projectile eventually tumbles and falls.

Tabulated Data:

Complete round:	
DODAC -----	1305-A940
UN serial number -----	0328
UN proper shipping name-----	Cartridges for weapons, inert projectile
Type-----	TPDS-T
Weight -----	421 ± 15 g
Length -----	8.78 in. (223 mm)
Cannon used with -----	M242
Projectile:	
Core -----	Steel
Sabot -----	Nylon
Nose cap-----	Polyethylene
Tracer -----	Magnesium
Explosive-----	NA
Fuze -----	NA
Color -----	Blue with white markings
Cartridge case-----	Steel

Propellant:

Type----- Single Base
 Weight----- 0.214 lb
 Primer Percussion----- M115

Performance:

Chamber pressure----- 58,000 psi
 Range----- 8000 m
 Muzzle velocity----- 1520 mps, 4990
 fps

Shipping and Storage Data:

DOD hazard class/SCG----- 1.2C
 Storage class----- Class C explosive
 DOT designation----- CARTRIDGES
 FOR WEAP-
 ONS, INERT
 PROJECTILES
 DOT label----- Explosive 1.2C
 UN serial number----- 0328

PA125 shipping and storage container:

Material----- Steel
 Weight (tactically packed)----- 53 lb
 Weight (empty)----- 22 lb
 Dimensions----- 13.8 x 13.8 x 5.5
 in.

Drawing number
 (for packing M910 in
 PA125)----- 12929427

Packing:

Tactical packing unit 30 linked cartridges in two
 15-round belts packed nose-to-nose with plastic separa-
 tor in steel shipping and storage container PA125.

References:

AMCP 700-3-2
 AR 385-64
 DA PAM 385-64

Weight 98 g
Primer percussion. M115 Mod A
Performance:
Chamber pressure. 62,000 psi
Effective range Classified
Range 18,000 m
Muzzle velocity 1385 mps (4544 fps)

Shipping and Storage Data:

DOD hazard class/SCG 1.2C (04)
Storage compatibility group. CARTRIDGES FOR
WEAPONS, INERT
PROJECTILES
DOT label. Explosive 1.2C
UN serial number. 0328

PA125 shipping and storage container:
Material Steel
Weight (tactically packed) 53 lb
Weight (empty) 22 lb
Dimensions. 13.8 x 13.8 x 5.5 in.

Packing:

Drawing number 12929427
Container. PA125 w/plastic separator
Configuration 2 belts (30 ctg)/PA125

Tactical packing unit: 30 linked cartridges in two 15-round belts packed nose-to-nose with plastic separator in steel shipping and storage container PA125.

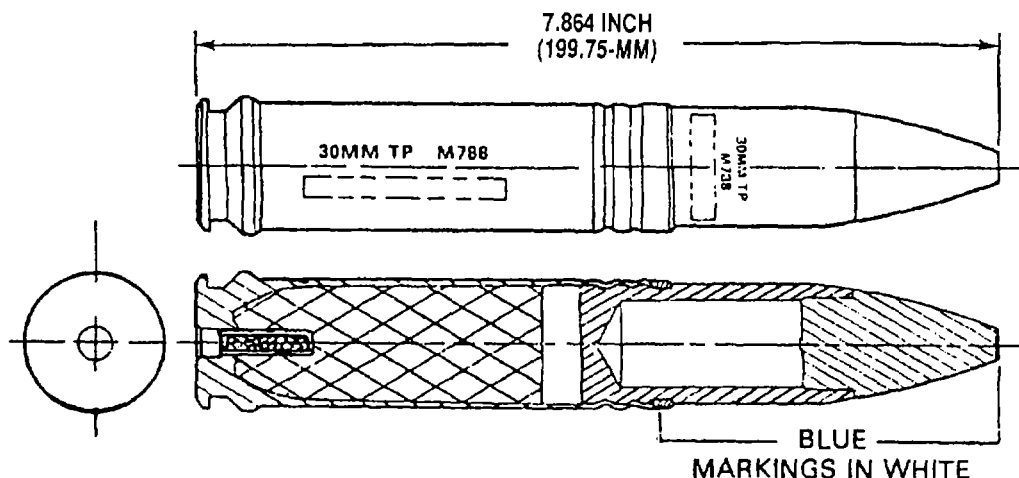
References:

AMCP 700-3-2
AR 385-64
DA PAM 385-64

CHAPTER 16
30MM CARTRIDGES

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CARTRIDGE, 30MM, TARGET PRACTICE, M788



U
AR 6002

Type Classification:

STD.

Use:

Automatic cannon, 30mm, XM230 (U.S.), ADEN MK IV (NATO), DEFA 552/553 (NATO). The cartridge is used in target practice.

Description:

TARGET PRACTICE Cartridge. The cartridge has a blue painted projectile with white markings. The inert/solid projectile is a three piece assembly consisting of steel body with cavity, rotating band, and aluminum nose piece. The cartridge case is aluminum.

Function:

The cartridge consists of an inert, solid projectile without a fuze. No function takes place except penetration of target.

Tabulated Data:

DODAC..... 1305-B118
 UNO serial number 0339
 UNO proper shipping name Cartridges for weapons, inert projectile
 Weight 5371 gr
 Length 7.864 in. (199.75 mm)

Tracer NA
 Primer Electric, PA520
 Fuze NA
 Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type WC 855
 Weight MBR, 50 gr

Performance:

Chamber pressure (avg)..... 40,600 to 44,950 psi (280-310 MPa)
 Velocity 2640 fps (805 mps)

Shipping and Storage Data:

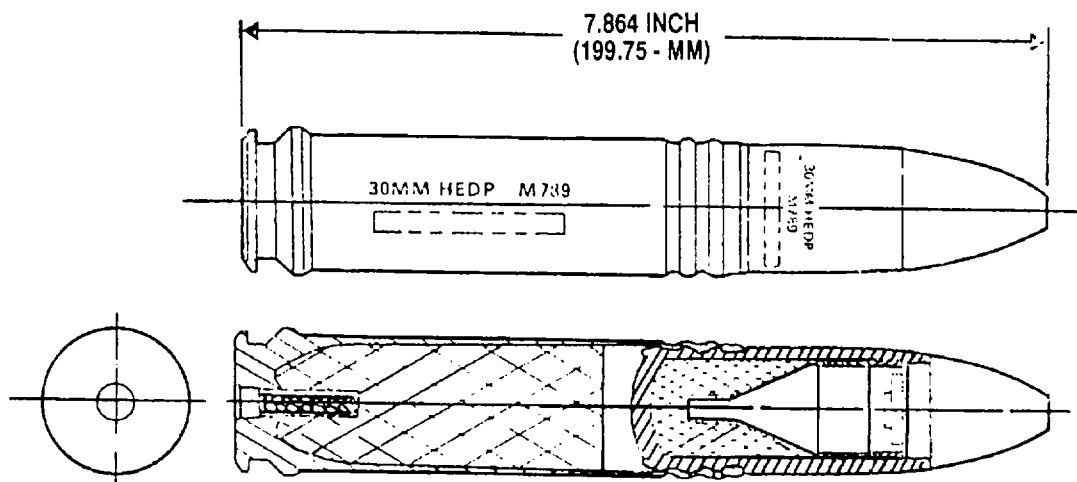
Quantity-distance class/
 SCG 1.4C
 Storage code Class V
 DOT shipping class B
 DO' designation AMMUNITION
 FOR CANNON
 WITH SOLID
 PROJECTILES
 Drawing number 28114038

References:

SB 700-20
 TM 9-1300-206

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CARTRIDGE, 30MM, HIGH EXPLOSIVE DUAL PURPOSE, M789



U
AR 6003

Type Classification:

STD.

Use:

Automatic cannon, 30mm, M230 (U.S.).

Description:

HIGH EXPLOSIVE DUAL PURPOSE Cartridge. The cartridge consists of a steel projectile body loaded with HMX explosive and spin compensated shaped charge liner, point detonating (PD) bore safe fuze and aluminum cartridge case.

Purpose:

The projectile fuze arms in flight. Upon impact, the fuze initiates the projectile explosive filler. Detonation of the filler charge collapses the shaped charge liner resulting in the formation of an armor-piercing jet. In addition, main charge detonation produces fragmentation of the projectile body resulting in antipersonnel effects in target vicinity.

Tabulated Data:

DODAC..... 1305-B129
 UNO serial number 0321
 UNO proper shipping

name Cartridges for weapons, with bursting charge
 Weight 5371 gr
 Length 7.864 in. (199.75 mm)
 Tracer NA
 Primer..... Electric, PA520
 Fuze PD, M759
 Explosive:
 Type PBXN-5
 Weight..... 340 gr
 Incendiary:
 Type NA
 Weight..... NA
 Propellant:
 Type WC 855
 Weight..... MBR, 50 gr-

Performance:

Chamber pressure (avg)..... 40,000 to 44,950 psi (280-310 MPa)
 Velocity 2640 fps (805 mps)

Shipping and Storage Data:

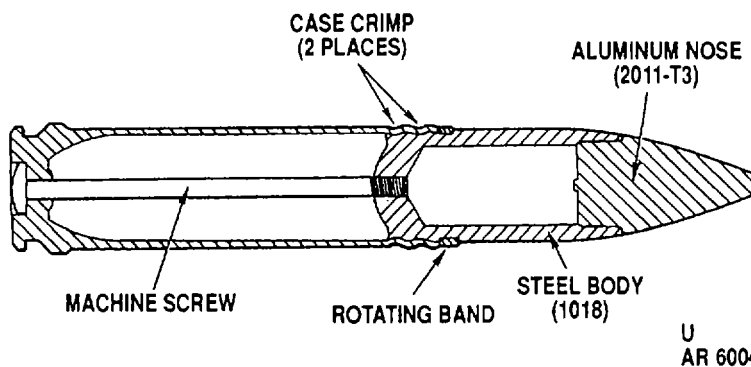
Quantity-distance class/
 SCG 1.2E (0.4)
 Storage code Class V
 DOT shipping class A

DOT designationAMMUNITION
FOR CANNON
WITH SOLID
PROJECTILES
Drawing number28114062

References:

SB 700-20
TM 9-1300-206

CARTRIDGE, 30MM, DUMMY, M848



Type Classification:

STD - LCC-A MSR 04826009.

Use:

Automatic cannon, 30mm, M230. The cartridge is used in drills of the weapon mechanism and to test link/delink functions.

Description:

DUMMY Cartridge. The cartridge is completely inert with modified target practice (TP) projectile and cartridge case. Primer and propellant are replaced with threaded steel bolt attached to the base of the projectile body to maintain same weight and balance as the TP cartridge. The projectile body is steel with an aluminum nose.

Tabulated Data:

DODAC..... 1305-B134
 Weight 5445 gr
 Length 199.75 mm
 Tracer NA
 Primer NA
 Fuze NA

Explosive:

Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type NA
 Weight NA
 Projectile:
 Length 104.28 mm
 Case Aluminum

Performance:

Chamber pressure NA
 Velocity NA

Shipping and Storage Data:

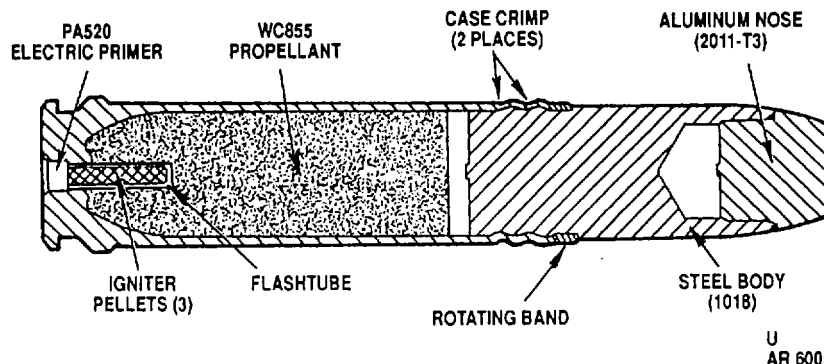
Quantity-distance class/
 SCG NA
 Storage code NA
 DOT shipping class NA
 DOT designation NONEXPLOSIVE
 AMMUNITION
 Drawing number 11825935

References:

DARCOM 700-3-2

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CARTRIDGE, 30MM, TEST, M883



Type Classification:

STD - LCC-A, MSR 06827003.

Use:

Automatic cannon, 30mm, M230. The cartridge is used in proof testing the weapon and barrel.

Description:

TEST Cartridge. The cartridge is a high pressure test round which provides 120 percent chamber pressure to proof test the weapon and barrel. Case, primer, and propellant are identical to the target practice round. Excess pressure is achieved through a heavier 1018 steel projectile. Ogive is blunt and cartridge case is silvered to distinguish from service rounds.

Tabulated Data:

DODAC..... 1305-B135
 UNO serial number 0321
 UNO proper shipping name Cartridges for weapons, with bursting charge
 Weight 6821 gr
 Length 174.35 mm
 Tracer NA
 Primer Electric, PA520
 Fuze NA

Explosive:
 Type NA
 Weight NA
 Incendiary:
 Type NA
 Weight NA
 Propellant:
 Type WC 855
 Weight 772 gr
 Projectile:
 Weight 5031 gr
 Length 79.13 mm

Performance:

Chamber pressure NA
 Velocity NA

Shipping and Storage Data:

Quantity-distance class/
 SCG 1.4C
 Storage code Class V
 DOT shipping class B
 DOT designation AMMUNITION FOR CANNON WITH SOLID PROJECTILES
 Drawing number 11895941

References:

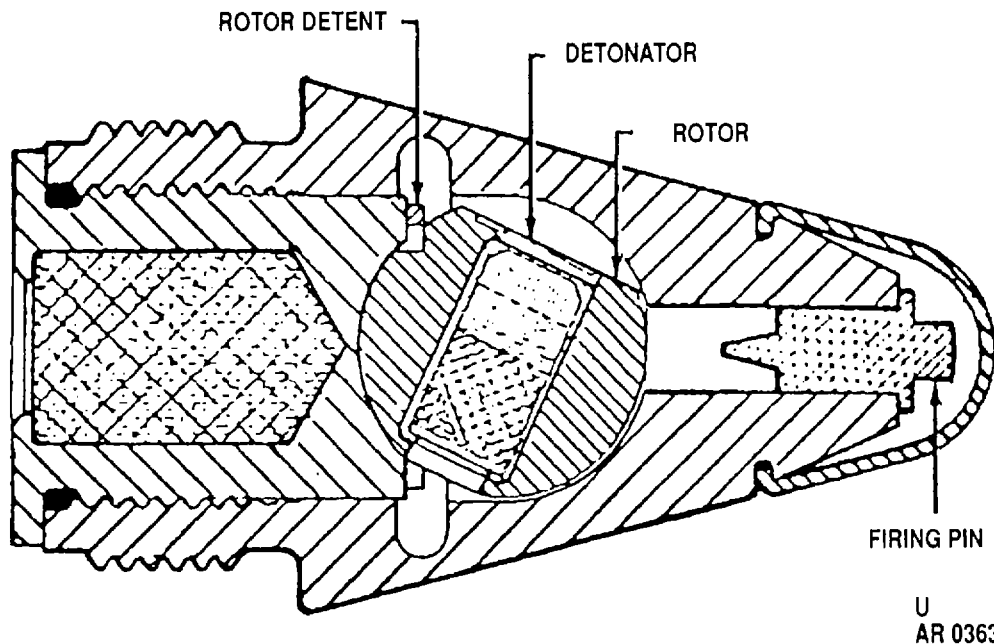
DARCOM 700-3-2

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CHAPTER 17
POINT-DETONATING FUZES

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FUZE, POINT-DETONATING: M505A3



Type .Classification:

STD.

Use:

The fuze is designed for use with the 20mm high explosive incendiary (HEI) and high explosive incendiary with tracer (HEI-T) cartridges against aircraft and light armor.:

Description:

The point-detonating, single-action nose fuze is intended to function upon impact with the target. The fuze is used with the following HEI cartridges: M56A3/A4, M97A2, M210, M242 and M246.

Function:

Upon impact, the fuze initiates the HE filler and disperses the incendiary filler. The fuze arms in flight. Its delay is 10 to 35 feet.

Tabulated Data:

Length (max)	1.23 in. (31 mm)
Weight	330 gr
Diameter	0.669 in. (17 mm)
Explosive components:	
Detonator.....	M47
Booster	T42

Packing:

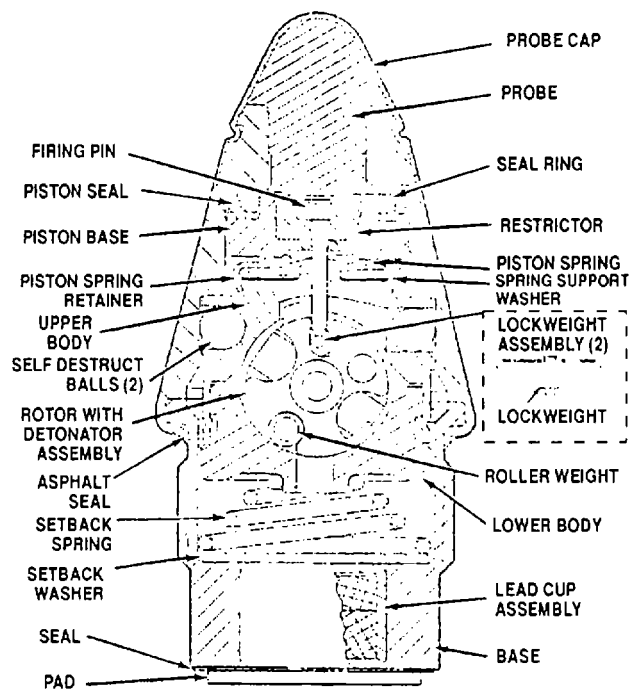
For shipping fuzes from the fuze manufacturer to the cartridge LAP facility, the fuzes are packed 200 fuzes per carton, six cartons per wooden box, 1200 fuzes per wooden box.

Shipping and Storage:

Quantity-distance class	1.1
DOT shipping class	C
DOT designation	DETONATING FUZES, CLASS C EXPLOSIVES
Drawing number	7258863

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FUZE, POINT-DETONATING, SELF-DESTROYING: M758



U
AR 6007

Type Classification:

STD - MSR 12796010.

Use:

The fuze is designed for use with the 25mm, high explosive incendiary with tracer, M792 cartridge, fired from the M242 cannon.

Description:

The point-detonating (PD), self-destroying (SD) M758 fuze is a delayed arming, PD SD type which also features graze impact sensitivity against hard and soft ground media as well as super-quick functioning upon target impact. The fuze consists of an ogive assembly crimped to a base assembly which houses a piston assembly, a piston spring, a body assembly, and a setback spring. The ogive assembly consists of a nylon probe within a steel ogive crimped to a steel probe cap while the base assembly consists of a lead charge within a steel base. The piston spring separates the piston assembly, consisting of an aluminum piston base, a piston seal, a seal ring, a steel restrictor, and a steel firing pin from the body assembly consisting of a nylon upper body, an aluminum lower body, a steel roller weight, a body, a zinc rotor; a detonator, two steel lockweights and lockweight springs which, in turn, separate from the base

assembly by the setback spring.

Function:

Starting from the safe condition, acceleration forces, associated with projectile launch, cause the body assembly and piston assembly located within the fuze ogive to be simultaneously set back to the rear of the fuze against the setback spring. Air originally in the bottom of the fuze is forced through ports into the chamber above the piston. The high spin forces, which occur almost simultaneously with the setback forces, serve three purposes. The spin effect causes two lockweights to move against their firing pin which keeps the motor in a safe position. Spin also causes two balls to move outward into groove located around the inner part of the ogive, locking the body assembly rearward against the compressed force of the setback spring. Spin also causes a rubber piston seal to flare out against the bore of the ogive, resulting in necessary piston scaling action. As the projectile leaves the muzzle, the acceleration force dissipates and the piston becomes free to move forward under forces exerted by the piston spring. The rate of piston movement forward is controlled by air being forced through a porous metal restrictor. This action provides the required arming delay time to meet the fuze no-arm and all-arm requirements. As the piston approaches the forward position, the firing pin is withdrawn from the

rotor, allowing it to rotate to the armed position. Centrifugal force acting on the roller weight causes it to move into a groove and lock the rotor in the armed position. The fuze is fully armed when the detonator is in line with the fitting pin and lead assembly. The fuze functions under conditions of direct impact, graze impact or self destruct (non-impact). Direct impact with the target causes a super-quick function of the fuze due to the crushing action of the nose probe. The nose probe is driven into the piston assembly, moving it rapidly rearward. The firing pin, as part of the piston assembly, is thereby driven into the detonator and the explosive train is initiated. Function at low graze angles can occur in two ways. On soft targets where the projectile tends to enter the target, the nose probe is crushed driving the piston firing pin into the detonator. On low angle or graze impacts on hard targets, deceleration of the projectile and spin decay occurs.

Spin decay reduces the centrifugal forces acting on the self-destruct balls and inertial force acts on the body assembly due to projectile deceleration. This, coupled with the stored energy of the setback spring, overrides the force exerted by the self destruct balls and the body assembly is driven forward rapidly. The detonator contacts the firing pin and begins initiation of the explosive train. If no contact is made with a target, the fuze will cause the projectile to function by self-destruct action after a predetermined flight time. Projectile spin decay reduces the centrifugal force acting on the self-destruct balls. The stored energy in the setback spring overrides the holdback force of the balls and forces the body assembly forward to drive the detonator into the firing pin. Initiation of the explosive train occurs, and the projectile is detonated while still in flight.

Tabulated Data:

Fuze M758:
 DODAC..... IBA

Length (max) 1.417 in. (36 n1ni)
 Weight (approx) 0.041 lb (18.56 g)
 Diameter (max)..... 0.661 in. (16.8 m1m)
 Center of gravity (from
 base) 0.602 in. (15.3 3m1m)
 Explosive components:
 Detonator RDX/Lead Axide/
 NOL 130, 0.038 g
 Lead charge HMX, 0.285 g

Packing:

For shipping fuzes from the fuze manufacturer to the cartridge LAP facility, one packing unit consists of 1000 fuzes individually inserted into foam trays (200 fuzes per tray and five trays per packing unit) which are stacked with chipboard separators and then packed into inner and outer fiberboard boxes.

Length 19 in. (482.6 1mm)
 Width 12.5 in. (317.5 mm)
 Height 10.1 in. (256.5 11m)
 Weight (empty) 11.5 l) (5.23 kg)
 Weight (1000 fuzes)..... 52.6 lb (23.86 kg)

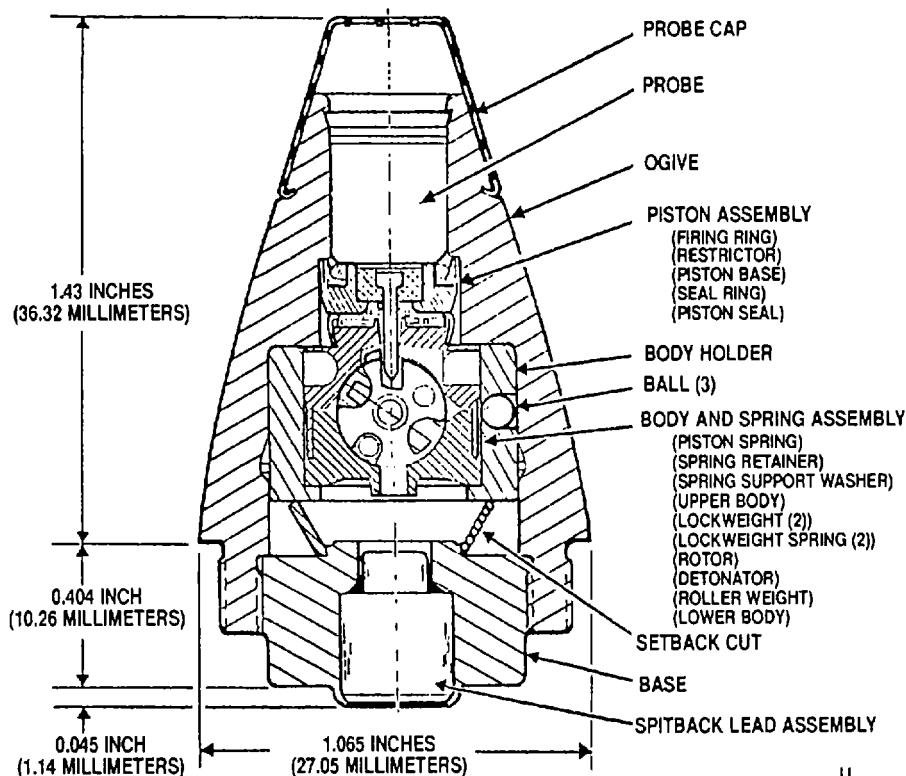
Shipping and Storage Data:

Quantity-distance class/
 SCG 1.1B
 Storage code Class VI
 DOT shipping class A
 DOT designation DETONATING
 FUZES, CLASS A
 EXPLOSIVES
 DOCAC..... TBA
 Drawing number DS8861

References:

DARCOM 700-3-2
 TM 9-1300-206

FUZE, POINT-DETONATING: M759 (XM714E6)

U
AR 6008**Type Classification:**

STD

Use:

The fuze is designed for use with the 30mm high explosive dual purpose (HEDP) cartridges fired from the M230 automatic cannon.

Description:

Fuze M759 (formally designated as the XM714E6) is a point-detonating type with detonator and spitback charge. It is used with HEDP cartridge M789.

Function:

Prior to launch, the fuze detonator is housed in the rotor with the rotor locked in the safe position by the firing pin tip and two lockweights. On setback, the piston assembly (with firing pin) and body assembly (with detonator and rotor) are moved to the most rearward position by the firing pill tip and two lockweights. As the

fuzed projectile exits the gun muzzle, spin environment causes the lockweights to retract from the rotor and the two steel balls to engage the ogive groove, locking the body assembly in the position it had achieved at setback. In addition, spin causes the piston seal to flare and engage the ogive sidewalls which eliminates the air flow path between the ogive and piston. Movement of the piston assembly (firing pin) to the forward or armed position is delayed due to the regulated flow of trapped air through the restrictor until the projectile has traveled a minimum of 15 meters from the muzzle. After retraction to the firing pin from the rotor (last safety lock), the spin causes the rotor (with detonator) to rotate to the armed state, i.e., stab detonator aligned with firing pin and lead cup assembly. As the rotor achieves the armed position (150 in), the roller weight moves outboard from the rotor and engages the detent from the lower and upper bodies thus locking the rotor in armed state. Upon target impact, the probe nose piece is driven into the ogive forcing the piston assembly (firing pin) aft. The firing pin stabs the detonator and its explosive initiates the lead cup assembly explosive which, in turn, ignites the main charge.

Tabulated Data:

Type.....PD
 Weight1.41 oz (40 g)
 Length.....1.88 in. (47.72 mm)
 Diameter1.06 in. (27.05 mm)
 Material.....Aluminum
 Non-arm range.....15 ii
 All-arm range150 m
 Explosive components:
 Detonator.....NOL No. 130
 Priming Mix,
 0.0055 g
 Lead Azide.....0.015 g
 RDX Type B.....0.016 g

Spitback lead assembly:
 PBXN, Type II, C1, 2
 or 3.....0.25 g
 PBXN-5, Type I, C1
 or 3.....0.06 g

Shipping and Storage Data:

Quantity-distance class/
 SCG.....1.IB
 DOT shipping classA
 DOT designationDETONATING
 FUZES, CLASS A
 EXPLOSIVE
 Drawing number.....11834312

CHAPTER 18

ACCESSORIES

GENERAL

a. Accessories. Accessories used with small arms ammunition, such as clips and metallic belt links, are described in this chapter. These items are listed and packed as indicated in SC 1305/30-IL and also listed in TM 9-1305-20120&P

b. Magazines for Pistols and Other Small Arms. Magazines for pistols and other small arms do not come preloaded from the ammunition supply point. The magazine for the submachine gun M3 and M3A1 holds

30 rounds of ammunition and this also is not preloaded.

c. Metallic Link Belts. Ammunition for use in machine guns is issued in metallic link belts. Link belts are made of units of cartridges and links. Each link has two loops fitted around a single cartridge and one loop fitted around an adjacent cartridge. Each cartridge in a metallic link belt has two links attached to it, except the end cartridges. Cartridge links are made of steel which is processed to prevent rusting. They are manufactured and tested to assure satisfactory ammunition feeding and functioning under all service conditions.

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ACCESSORIES FOR CARTRIDGES, CALIBER .50

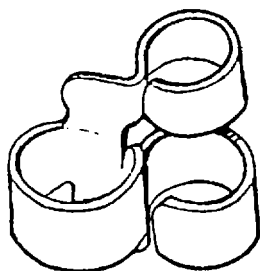
Links, Closed Loop, M2 and M9:

Caliber .50, M2 and M9 links (fig. 18-7) are manufactured with closed loops. When assembled with the cartridge in belts, the links fit on the cartridge shoulder. The tapered front loops of the links are positioned firmly on the cartridge shoulder to hold the cartridge in proper alignment for feeding into the

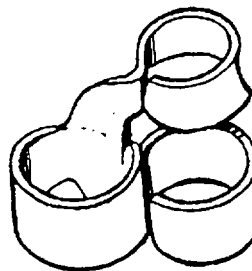
weapon. The design required the cartridge to be extracted from the rear and dropped into position for moving into the chamber for firing. Weapons designed for the links require additional space in the rear of the receiver for retraction. M2 and M9 links are used with the M2 machine gun.

Link, M2 (NSN 1305-00-096-3181(A640))

Link, M9 (NSN 1305-00-078-8463(A641))



CALIBER .50, M2



CALIBER .50, M9

CLOSED LOOP

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AR 6015

Figure 18-7. Caliber .50, M2 and M9 links (closed loop).

Link, Open Loop, M15A2:

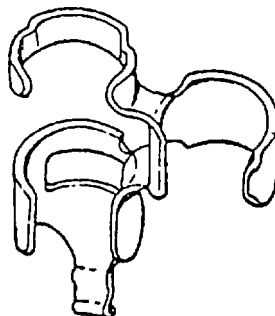
The caliber .50, M15A2 link (fig. 18-8) is manufactured with partially open loops and has a positioning finger on one side which snaps into the extractor grooves of the cartridge to retain the cartridge in proper feed alignment. The link design permits a portion of bolt to ride through link loop openings and

push the cartridges forward and out of the link into the chamber for firing. The M15A2 link is used with the M85 machine gun.

References:

SC 1305/30IL

TM 9-1305-201-20&P



CALIBER .50, M15A2

OPEN LOOP

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AR 6016

Figure 18-8. Caliber .50, M15A2 link (open loop).

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ACCESSORIES FOR CARTRIDGES, 5.56MM

Clips:

Cartridges for the 5.56mm M16 rifle are assembled in 10-round clips. The clip (fig. 18-1) consists of a channel-shaped body containing a spring with narrow

tabs at each end. After the clip is filled, the tabs are bent at right angles to the extractor rims of the end cartridges to hold them securely in the clip (NSN 1305-00-0524377).

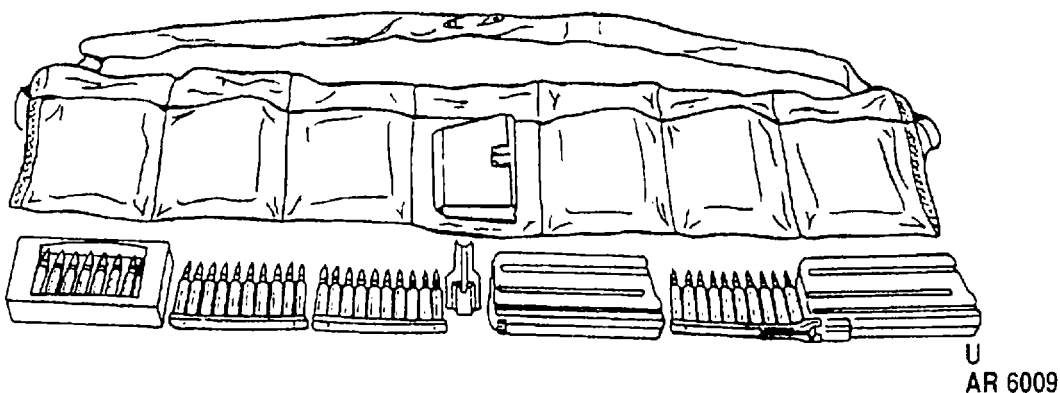
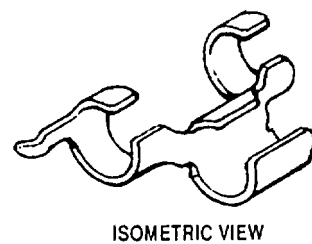


Figure 18-1. Cartridge clips and bandoleer for 5.56mm cartridges.

Link M27:

The M27 link (fig. 18-2) is a reduced size of the 7.62mm link M13. The body link fits into the extractor groove on the cartridge case. The U.S. Navy, uses the link with the Stoner Machine Gun M63. The U.S. Army designated its use for the M249 Machine Gun. The link is used with M855 Ball Cartridges, M856 Tracer, and M200 Blank only.



Other Accessories:

Fillet; Magazine.
Bandoleer; M3 (NSN 1305-00-9)24-3088).

References:

SC 1305/30IL
TM

9-1305-201-20&P

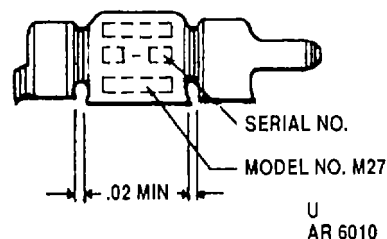


Figure 18-2. M27 link for 5.56mm.

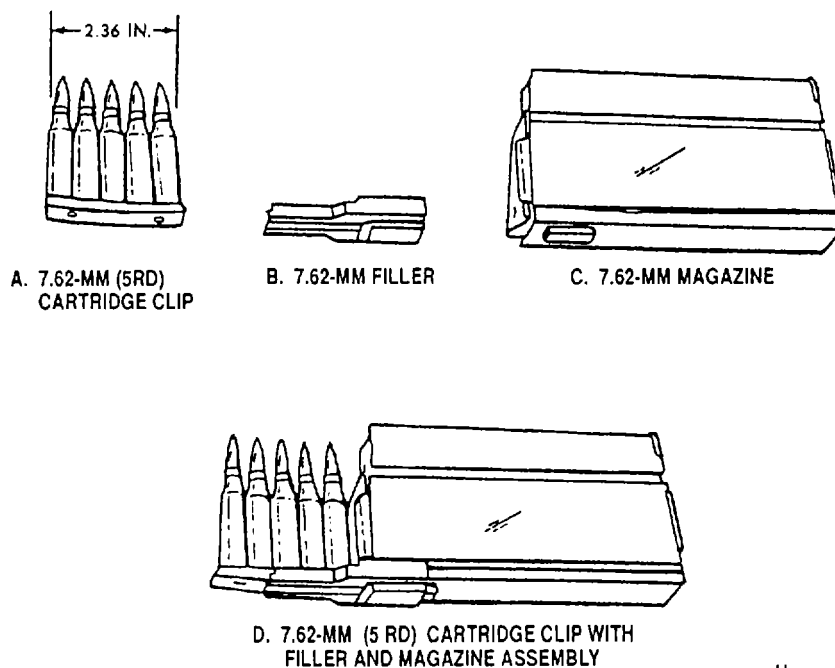
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ACCESSORIES FOR CARTRIDGES, 7.62MM

Clips:

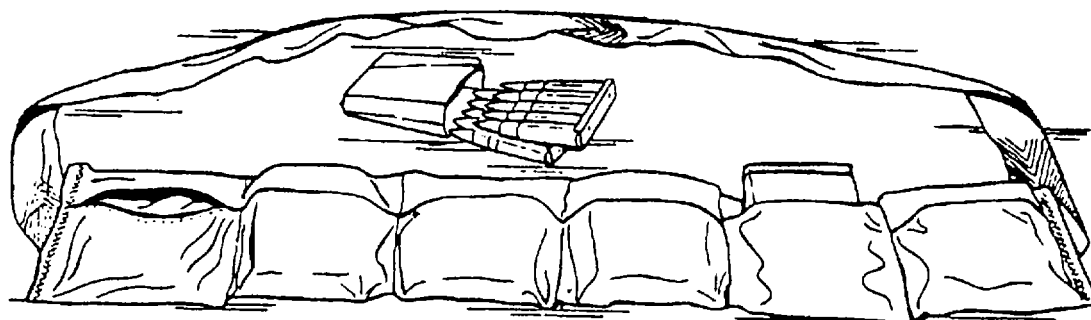
Cartridges for the 7.62mm M14 rifles are assembled in 5-round clips (fig. 18-3). All cartridges are packed in bandoleers with separate magazine fillers. The clip, which consists of a channel-shaped body containing a spring, facilitates loading of magazines. Loaded clips are fitted into the top of the rifle receiver and the

cartridges are pressed into the magazine assembly. A magazine fillet; which adapts clips to the magazine, allows individual magazines to be loaded with clipped ammunition. The clip is 2.36 inches long. The 7.62mm ammunition and clip are shown with the M2 bandoleer in figure 18-4 and with the M4 bandoleer in figure 18-5. The M4 bandoleer is for belted ammunition for machine guns (NSN 1305-00-914-7912).



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AR 6011

Figure 18-3. Cartridge clip, filler, and magazine assembly for 7.62mm cartridges.



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AR 6012

Figure 18-4. M2 bandoleer for 7.62mm cartridges.



Figure 18-5. M4 bandoleer for 7.62mm cartridges.

Link M13:

The 7.62mm M13 link (fig. 18-6) is manufactured with partially open loops and has a positioning finger on one side which snaps into the extractor grooves of cartridges to retain the cartridge in proper feed alignment. The link design permits a portion of the bolt to ride through the link opening and push cartridges forward and out of the link into the chamber for firing.

Weapons using this type link are designed and manufactured with a short receiver, i.e., M60, M73, M219, M240, and M134 machine guns (NSN 1305-00-752-7815).

Other Accessories:

Fillet; Magazine.
 Bandoleer; M2 (NSN 1305-00-984-1125).
 Bandoleer M4 (NSN 1305-00-079-3579).

References:

SC 1305/30IL
 TM 9-1305-201-20&P

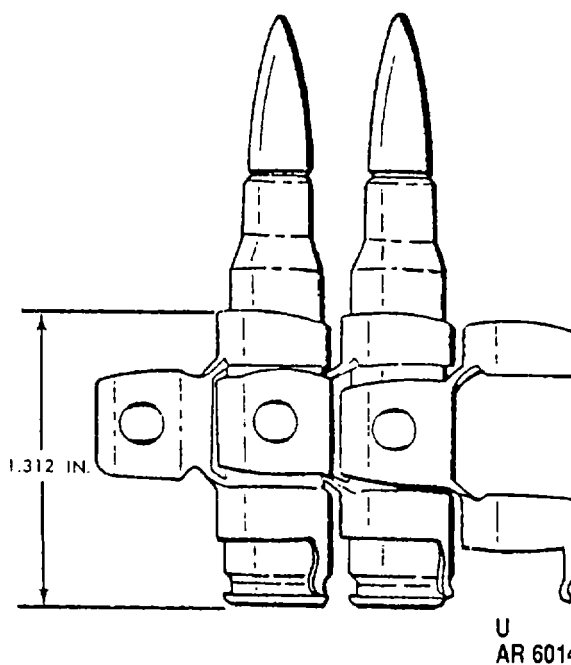


Figure 18-6. Cartridge M13 link for 7.62mm cartridges.

ACCESSORIES FOR CARTRIDGES, 20MM

Link M10:

The M10 link (fig. 18-9) is utilized in the M3 and M24 belt-fed automatic guns. The link is of steel and the belt is formed by the placement of cartridges within the links. The link is self-separating when the cartridges are removed during the gun feeding cycle. The metallic link can be used to make up belts for either right-hand or

left-hand feeding of the gun. A cartridge metallic-link filler is used at the end of the belt when it is desired to load belts for either double-loop left-hand feed or double-loop right-hand feed. The purpose of the link-filler is to close the single loop when it is at the end of the belt to prevent snagging in the feed chute (NSN 1305-00-028-4869).

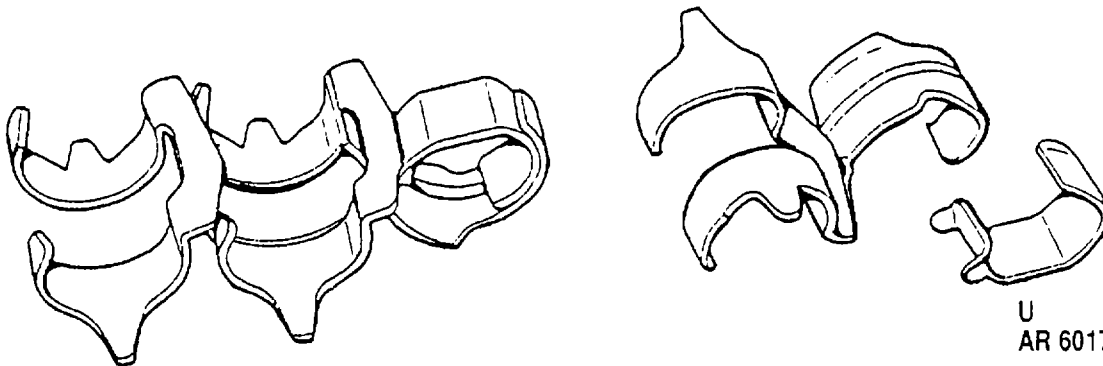


Figure 18-9. M10 link for 20mm cartridges.

Link M12:

The M12 metallic link (fig. 18-10) is used in belt-fed gas-operated M39 series automatic aircraft guns. The ammunition belt is formed by connecting a specified

number of links together and then inserting a cartridge for each link. The link is self-separating when cartridges are removed during the gun-feeding cycle. The M12 is an end loading link and is linked for either the right-hand or left-hand feeder (NSN 1305-00-541-0021).

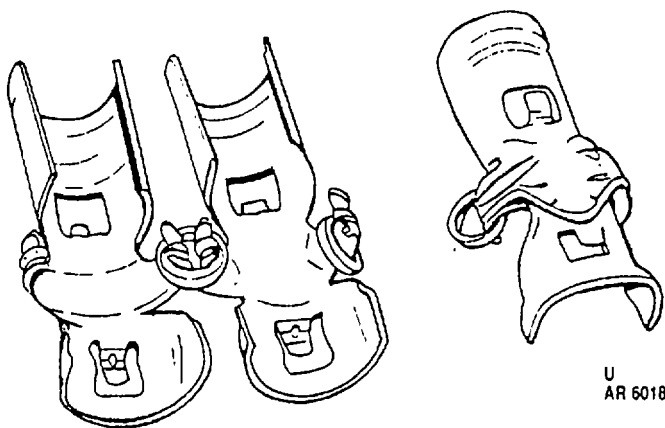
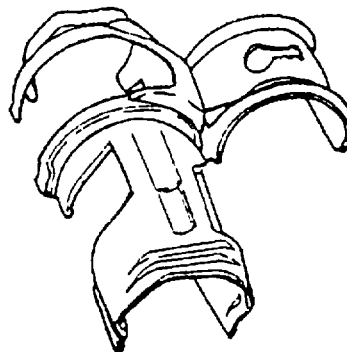
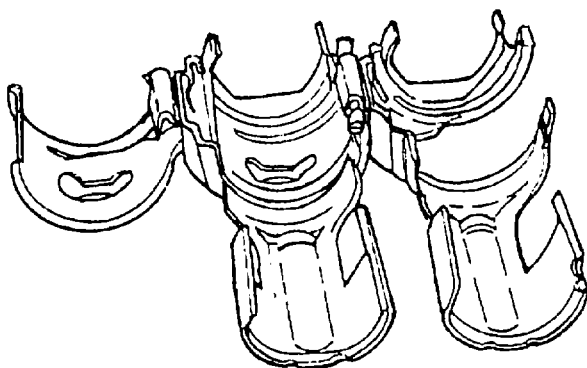


Figure 18-10. M12 link for 20mm cartridges.

Link M14A2:

The M14A2 link (fig. 18-11) is used primarily for linking 20mm ammunition for belt-fed M61 automatic

guns and loading of ammunition into linkless feed systems used in aircraft and ground defense vehicles. The link is self-separating when cartridges are removed during the feeding cycle (NSN 1305-00-935-9219).



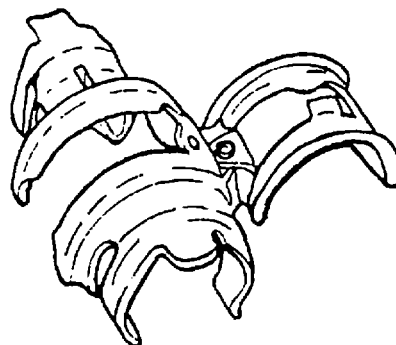
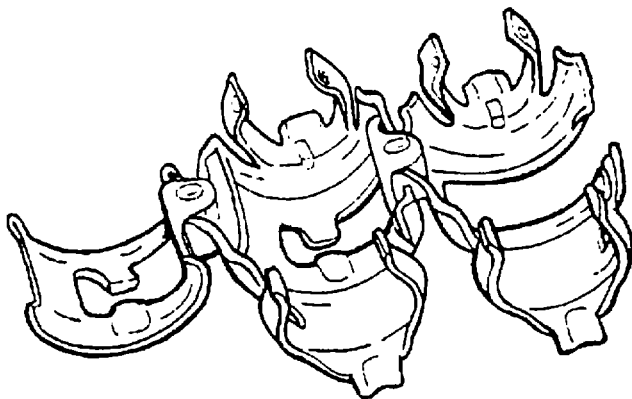
U
AR 6019

Figure 18-11. M14A2 link for 20mm cartridges.

Link M17A2:

The M17A2 link (fig. 18-12) is used for linking 20mm ammunition for belt-fed M61 automatic weapon

system in the B52 G & H aircraft. The link is self-separating when the cartridge is removed from the link during the feeding cycle,



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AR 6020

Figure 18-12. M17A2 link for 20mm cartridges.

Link M24 and M22:

The M24 link (fig. 18-13) is a metallic link for use with the following 20mm cartridges: M206A1 Target-Practice, M599 High-Explosive Incendiary Tracer, and M601 Armor-Piercing Incendiary tracer. The European (German) DMI/DMIA link is also used for these

cartridges. The DMI/DMIA link is used with the HSH20 series. The M22 link is for U.S. Air Force use only. It is used to upload their linkless system. It is reusable and does not disintegrate.

Link, M22 (NSN 1305-00-926-1939).

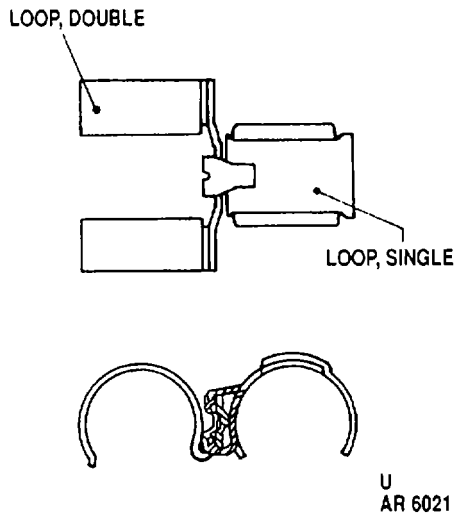


Figure 18-13. M24 link.

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ACCESSORIES FOR CARTRIDGES, 25MM**Link M28:**

The M28 link (fig. 18-14) is a two piece assembly intended to hold and link the 25mm ammunition for guiding the ammunition through the weapon system.

The assembly consists of hardened steel main and pivot links hooked together and contoured accordingly for its intended purpose. The Swiss Oerlikon link and the M28 male dimensionally identical.

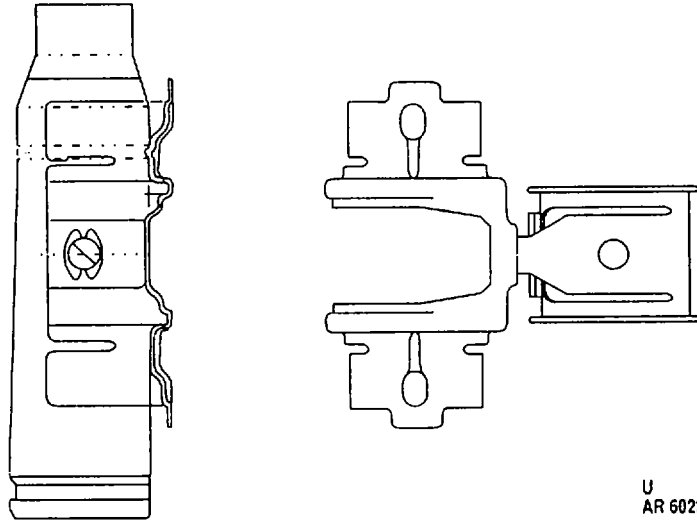


Figure 18-14. M28 link for 25mm cartridges.

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ACCESSORIES FOR CARTRIDGES, 30MM

Link M29:

The M29 link (fig. 18-15) is 1050 steel with type Z (link) phosphate coating. It is used for interoperability with the NATO ADEN/DEFA weapon systems (NSN 1305-01-078-5505).

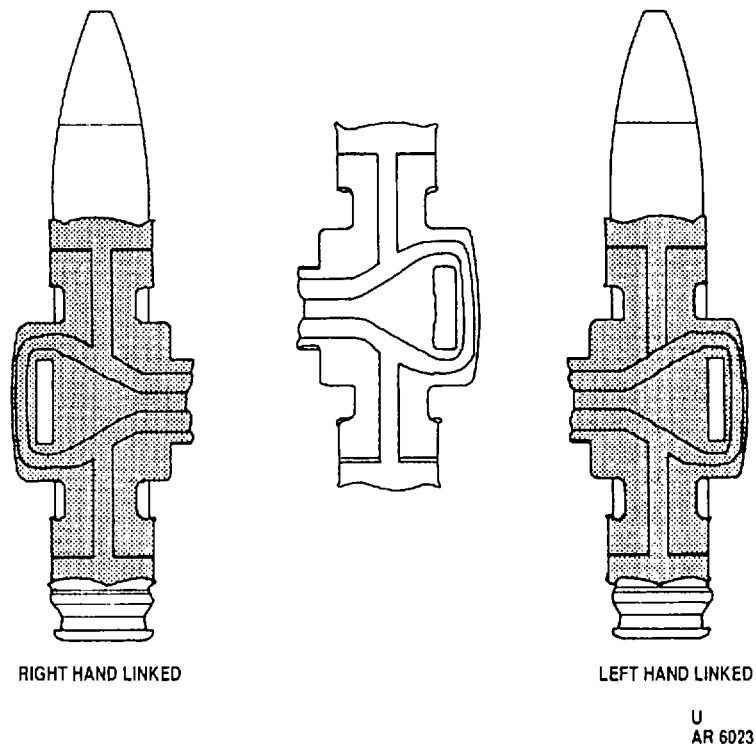


Figure 18-15. M29 link.

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TABLE 18-1. SMALL ARMS AMMUNITION

Caliber	Ammunition	Clip	Magazine	Link	Weapon used
5.56mm	M193 Ball M195 Grenade M196 Tracer M197 High Pressure Test M199 Dummy M200 Blank M855 Ball M856 Tracer	10 rd	20 and 30 rd	M27	M231 Submachine Gun for M196 tracer only. M16/M16A1 rifle. Stoner M63 (Navy) and M249 machine guns.
7.62mm	M59, M80 Ball M61 Armor Piercing M62 Tracer M63 Dummy M82 Blank M60 High Pressure Test M64 Grenade M118 Ball Match M160 Frangible M172 Dummy M852 Ball Match	5 rd	20 rd	M13 open loop for MG	M14 rifle; M60, M73, M219, M240*, and M134 machine guns. M14 rifle only. M14 rifle only M219 MG only. M60 MG only.

NOTE
 10 rd clip f/M16A1.
 5 rd clip f/M14.
 20 rd mag f/M16A1.
 30 rd mag f/M16A1.
 20 rd mag f/M14.

Cal. 45	Ball, M1911 Blank M9 High Pressure Test M1		7 rd for pistol 30 rd for sub-machine gun.	N/A	Pistol M1911 and M1911A1. Submachine gun M3 and M3A1.
Cal .50	M2 Ball M33 Ball M2 Armor Piercing M8 Armor Piercing Incendiary M20 Armor Piercing Incendiary-Tracer	N/A	N/A	**M15A2 open loop with M85 MG.	M85 Machine Gun.
	M1 Incendiary M23 Incendiary M1 Tracer M10 Tracer M17 Tracer M2 Dummy, High Pressure Test	N/A	N/A	***M2 and M9 closed loops with M2 MG.	M2 Machine Gun only.
	M1 Blank M1A1 Blank with M2 MG. M48A2 Spotter-Tracer	N/A	N/A	***M2 and M9 closed loops	M2 Machine Gun only.
	T249E2 Practice T251 High Pressure Test	N/A N/A	10 and 20 rd 10 and 20 rd	N/A N/A	M8C Spotting Rifle M8C Spotting Rifle

* M240 Machine Gun only fires the Ball M80 and the Tracer M62.
 ** Link M15A2 Open Loop used with M85 Machine Gun only.
 ***Link M2 and M9 Closed Loop used with M2 Machine Gun only.

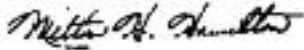
TABLE 18-1. SMALL ARMS AMMUNITION - Continued

Caliber	Ammunition	Link	Weapon (gun)
20mm	HEI-T-SD M246/M246A1 HEI M56A3/M56A4 TP-T M220 TP M55A2 Dummy M51A2	M14 series	M167A1 (M168 Cannon)
20mm	API-T M52E1 API M53 HEI M56A3/M56A4 HEI-T M242 HEI-T-SD M246/M246A1 TP M55A2 TP-T M220 Dummy M51A2	M12 Metallic Link for M39 Cannon. M14A2 for M61 Cannon.	M39, M61
20mm	API-T M52E1 API M53 HEI M56A3/M56A4 HEI-T M242/M242A1 HEI-T-SD M246/M246A1 TP M55A2 TP-T M220 Dummy M51A2	M17A2	M61
20mm	API M53 HEI M56A3/M56A4 TP M55A2 Dummy M51A2	M14A2	M195 Linker-Delinker M25
20mm	HEI-T-SD M246/M246A1 HEI M56A3/M56A4 TP-T M220 TP M55A2 Dummy M51A2	M14A2	168, 197
20mm	AP-T M95 Incendiary M96 TP M204 HEI M210	M10	M3
20mm	AP-T M95 Incendiary M96 HEI M97A2 TP M99A1	M10	M24A1
20mm	HEI-T M599 API-T M601 TP-T M220	M24 or DMI/DMIA	139
25mm	API-T M791 HEI-T M792 TP-T M793	M28	M242
30mm	HEDP M789 TP M788 HEI M799	M29	M230 NATO M552/M553

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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