World leader in ammunition for portable weapons and one of the main suppliers to NATO, CBC is the premier Defense brand in the small caliber segment. CBC products are used globally and contribute to the protection and security of millions of people.

CBC was created in Brazil in 1926 and holds the status of Strategic Defense Company, being the primary supplier to the local military and law enforcement sectors. It serves as the headquarters for CBC Global Ammunition, the holding for a group of companies internationally active in the ammunition sector: CBC Brazil, Magtech Ammunition USA, MEN Germany and Sellier & Bellot Czech Republic.

This strategic alliance forms one of the largest ammunition corporations in the world, with a combined experience of more than 300 years in the manufacturing of small and medium calibers.

The comprehensive range of CBC products is exported to over 100 countries, meeting the needs of Military, Law Enforcement and Commercial markets.

Together, CBC Global operations employ 3,500 skilled workers and produce over 1.5 billion rounds of ammunition per year.

To learn more about CBC Defense and CBC Global Ammunition, please access cbcdefense.com / cbcglobal-ammunition.com.
**NATO BALL 124 gr**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 16 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AEP-97 ED A V1 FMJ</td>
<td>7.8 g / 124 gr</td>
<td>386 m/s / 1247 ft/s</td>
<td></td>
</tr>
</tbody>
</table>

**ENERGY AT 16 m**

580 J

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**SAFETY TEMPERATURE**

-54°C to +71°C

**TEMPERATURE**

34°C to 40°C

**SMOOTH BORE**

-9°C to +25°C

**TEMPERATURE**

8°C to +4°C

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

NATO-qualified cartridge (AC/116-XVIIB) for training and service, used in pistols and sub-machine guns.

---

**NATO BALL 115 gr**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 16 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AEP-97 ED A V1 FMJ</td>
<td>7.45 g / 115 gr</td>
<td>386 m/s / 1247 ft/s</td>
<td></td>
</tr>
</tbody>
</table>

**ENERGY AT 16 m**

567 J

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**SAFETY TEMPERATURE**

-54°C to +71°C

**TEMPERATURE**

34°C to 40°C

**SMOOTH BORE**

-9°C to +25°C

**TEMPERATURE**

8°C to +4°C

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

NATO standard cartridge for training and service, used in pistols and sub-machine guns.

---

**NATO BALL 124 gr**

Militarized ball cartridge for training and service. Manufactured according to SAAMI specifications and features additional military-spec characteristics such as NATO-qualified energetics, full watertightness, visible annealing marks and superior ballistic performance.

---

**FMJ 123 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMJ 12.96 g / 200 gr</td>
<td>318 m/s / 1043 ft/s</td>
<td>655 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-104.5 cm / -34.2 inch

**POINT OF IMPACT AT 200 m**

-321.9 cm / -105 inch

**POINT OF IMPACT AT 300 m**

-86.8 cm / -27.7 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

Subsonic cartridge specially designed for suppressed weapons. Carefully selected propellant guarantees flawless functioning in all AR platforms, both pistol and carbine length gas systems. Base design according to SAAMI specifications and features additional military-spec characteristics such as NATO-qualified energetics, full watertightness, visible annealing marks and superior ballistic performance.

---

**FMJ SUBSONIC 200 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMJ SUBSONIC 12.96 g / 200 gr</td>
<td>318 m/s / 1043 ft/s</td>
<td>655 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-104.5 cm / -34.2 inch

**POINT OF IMPACT AT 200 m**

-321.9 cm / -105 inch

**POINT OF IMPACT AT 300 m**

-86.8 cm / -27.7 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

---

**OPEN TIP MATCH 7.45 g / 115 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN TIP MATCH 7.97 g / 123 gr</td>
<td>675 m/s / 2215 ft/s</td>
<td>1815 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-27.4 cm / -8.8 inch

**POINT OF IMPACT AT 200 m**

-61.1 cm / -19.9 inch

**POINT OF IMPACT AT 300 m**

-78.0 cm / -25.6 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

Militarized Open Tip Match cartridge for training and service, featuring superior precision and terminal effects compared to ball version. Manufactured according to SAAMI and relevant military-spec characteristics, such as NATO-qualified energetics, full watertightness and visible annealing marks.

---

**OTM 115 gr**

Militarized ball cartridge for training and service, used in pistols and sub-machine guns. Manufactured according to SAAMI specifications and features additional military-spec characteristics such as NATO-qualified energetics, full watertightness, visible annealing marks and superior ballistic performance.

---

**SMALL CALIBER**

9 x 19 mm

**300 Blackout**

**FMJ 123 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMJ 12.96 g / 200 gr</td>
<td>318 m/s / 1043 ft/s</td>
<td>655 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-104.5 cm / -34.2 inch

**POINT OF IMPACT AT 200 m**

-321.9 cm / -105 inch

**POINT OF IMPACT AT 300 m**

-86.8 cm / -27.7 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

Subsonic cartridge specially designed for suppressed weapons. Carefully selected propellant guarantees flawless functioning in all AR platforms, both pistol and carbine length gas systems. Base design according to SAAMI specifications and features additional military-spec characteristics such as NATO-qualified energetics, full watertightness, visible annealing marks and superior ballistic performance.

---

**FMJ SUBSONIC 200 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMJ SUBSONIC 12.96 g / 200 gr</td>
<td>318 m/s / 1043 ft/s</td>
<td>655 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-104.5 cm / -34.2 inch

**POINT OF IMPACT AT 200 m**

-321.9 cm / -105 inch

**POINT OF IMPACT AT 300 m**

-86.8 cm / -27.7 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

---

**OPEN TIP MATCH 7.45 g / 115 gr**

<table>
<thead>
<tr>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 4.6 m</th>
<th>Energy AT 4.6 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN TIP MATCH 7.97 g / 123 gr</td>
<td>675 m/s / 2215 ft/s</td>
<td>1815 J</td>
<td></td>
</tr>
</tbody>
</table>

**CASE POINT OF IMPACT**

BRASS 0 cm / 0 inch

**POINT OF IMPACT AT 100 m**

-27.4 cm / -8.8 inch

**POINT OF IMPACT AT 200 m**

-61.1 cm / -19.9 inch

**POINT OF IMPACT AT 300 m**

-78.0 cm / -25.6 inch

*Temperatures: 21°C (70°F) | Test Barrel Length: 406 mm (16”)*

Militarized Open Tip Match cartridge for training and service, featuring superior precision and terminal effects compared to ball version. Manufactured according to SAAMI and relevant military-spec characteristics, such as NATO-qualified energetics, full watertightness and visible annealing marks.
### NATO BALL

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AP75 03 02 Y V1</td>
<td>NONE</td>
<td>BALL</td>
<td>4.08 g / 62 gr</td>
<td>935 m/s / 3050 ft/s</td>
</tr>
</tbody>
</table>

**NATO qualified cartridge equivalent to M855 and SS109.** Suitable for weapons with a 1:7 to 1:9 barrel twist, may also be offered linked with any other trajectory-matched cartridges, such as Tracer, IR Tracer and SAT, in different configurations.

### NORTHERN TRACER

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AP75 03 02 Y V1</td>
<td>RED</td>
<td>TRACER</td>
<td>4.08 g / 62 gr</td>
<td>935 m/s / 3050 ft/s</td>
</tr>
</tbody>
</table>

**Standard tracer cartridge equivalent to M196, with full luminosity trace up to 400 m from the muzzle, visible in both day and night. Suitable for 5.56 x 45 mm weapons with a 1:7 to 1:9 barrel twist. May also be offered linked with any other trajectory-matched cartridges, such as Ball and/or SAT versions, in different configurations.**

### INFRARED TRACER

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AP75 03 02 Y V1</td>
<td>LILAC</td>
<td>INFRARED</td>
<td>4.08 g / 62 gr</td>
<td>935 m/s / 3050 ft/s</td>
</tr>
</tbody>
</table>

**NATO standard tracer cartridge equivalent to M855 and L110, with full luminosity trace up to 900 m from the muzzle, visible in both day and night. Suitable for 5.56 x 45 mm weapons with a 1:7 to 1:9 barrel twist. May also be offered linked with any other trajectory-matched cartridges, such as Ball and/or SAT versions, in different configurations.**

### SAT IMPROVED PERFORMANCE

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO AP75 03 02 Y V1</td>
<td>NONE</td>
<td>STEEL ARROW TIP</td>
<td>4.08 g / 62 gr</td>
<td>935 m/s / 3050 ft/s</td>
</tr>
</tbody>
</table>

**Improved performance cartridge suitable for 5.56 x 45 mm weapons with 1:7 to 1:9 barrel twist. It combines superior hard target penetration with better terminal effects than conventional 5.56 NATO Ball version. Loaded with a lead-free projectile, the 5.56 SAT provides more lethality at closer and long-range engagements up to 800 meters. May also be offered linked with trajectory-matched cartridges, such as Ball, Tracer and IR-Tracer, in different configurations.**

### BALL M193

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO C-6816</td>
<td>NONE</td>
<td>BALL</td>
<td>3.56 g / 56 gr</td>
<td>898 m/s / 2945 ft/s</td>
</tr>
</tbody>
</table>

**Standard Ball cartridge equivalent to M193. Suitable for weapons with a 1:12 barrel twist, may be offered linked with Tracer version (M196).**

### TRACER M196

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>TIP IDENTIFICATION</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 244 m/1 År</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO C-6816</td>
<td>RED</td>
<td>TRACER</td>
<td>3.56 g / 56 gr</td>
<td>898 m/s / 2945 ft/s</td>
</tr>
</tbody>
</table>

**Standard tracer cartridge equivalent to M196, with full luminosity trace up to 400 m from the muzzle, visible in both day and night. Suitable for weapons with 1:12 barrel twist. May also be offered linked with 5.56 Ball M193, in different configurations.**

### BLANK SHORT

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>STAR CRIMP</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO C-6816</td>
<td>6</td>
<td>51 mm / 2 in</td>
<td>7.1 g / 119 gr</td>
<td>BREECH</td>
<td>-26°F to +125°F</td>
</tr>
</tbody>
</table>

**Standard Blank training cartridge equivalent to M200, may be used in standard and shorter magazines. Used with Blank Firing Attachment, it can be adjusted to all automatic weapons to provide consistent and reliable functioning.**

### BLANK INTERMEDIARY

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>STAR CRIMP</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO C-6816</td>
<td>6</td>
<td>56 mm / 2.25 in</td>
<td>7.1 g / 119 gr</td>
<td>BREECH</td>
<td>-26°F to +125°F</td>
</tr>
</tbody>
</table>

**Standard Blank training cartridge equivalent to M51, may be used in standard and shorter magazines. Used with Blank Firing Attachment, it can be adjusted to all automatic weapons to provide consistent and reliable functioning.**

### BLANK LONG

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>STAR CRIMP</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATO C-6816</td>
<td>6</td>
<td>56 mm / 2.25 in</td>
<td>7.1 g / 119 gr</td>
<td>BREECH</td>
<td>-26°F to +125°F</td>
</tr>
</tbody>
</table>

**Standard Blank cartridge for training. Used with Blank Firing Attachment, it can be adjusted to all automatic weapons to provide consistent and reliable functioning.**
NATO-qualified cartridge equivalent to M80. Suitable for all 7.62 x 51 mm weapons, may also be offered linked with any other trajectory-matched cartridges, such as Tracer, IR Tracer and AP, in different configurations.

**NATO BALL**

- **Normative Reference**: NATO AEP-97 ED A V1
- **Tip Identification**: Ball
- **Projectile Type**: M80
- **Projectile Weight**: 9.33 g / 144 gr
- **Velocity at 24 m**: 831 m/s / 2733 ft/s

**Energy at 24 m**

- Case: 3237 J
- Service Temperature: 56°C / 133°F
- Safety Temperature: 49°C / 120°F
- Barrel Twist: -

**Normative Reference**

- Brass: -54°C to +52°C
- -65°F to +125°F
- -54°C to +71°C
- -65°F to +160°F

**Infrared Tracer**

Infrared Tracer cartridges are meant for night operations, granting the combat forces a stealth advantage. The bullet trace is completely invisible to the naked eye and only visible with the use of Night Vision Devices (NVDs). Suitable for all 7.62 x 51 mm weapons, it may be offered linked with any other trajectory-matched cartridges, such as Ball and/or AP, in different configurations.

**NATO Tracer**

- **Normative Reference**: NATO AEP-97 ED A V1
- **Tip Identification**: Red
- **Projectile Type**: M62
- **Projectile Weight**: 9.30 g / 144 gr
- **Velocity at 24 m**: 831 m/s / 2733 ft/s

**Energy at 24 m**

- Case: 2796 J
- Service Temperature: 56°C / 133°F
- Safety Temperature: 49°C / 120°F
- Barrel Twist: -

**Normative Reference**

- Brass: -54°C to +52°C
- -65°F to +125°F
- -54°C to +71°C
- -65°F to +160°F

**Blank**

Standard Blank training cartridge equivalent to M82. Used with Blank Firing Attachment, it can be adjusted to all automatic weapons to provide consistent and reliable functioning.

**NATO AP**

- **Normative Reference**: NATO AEP-97 ED A V1
- **Tip Identification**: Black
- **Projectile Type**: M61
- **Projectile Weight**: 9.56 g / 148 gr
- **Velocity at 24 m**: 831 m/s / 2733 ft/s

**Energy at 24 m**

- Case: 2796 J
- Service Temperature: 56°C / 133°F
- Safety Temperature: 49°C / 120°F
- Barrel Twist: -

**Normative Reference**

- Brass: -54°C to +52°C
- -65°F to +125°F
- -54°C to +71°C
- -65°F to +160°F

With higher accuracy performance, the 7.62 Match is suitable for use in precision rifles, as well as conventional weapons.

**Match**

- **Normative Reference**: NATO AEP-97 ED A V1
- **Tip Identification**: Match
- **Projectile Type**: M62
- **Projectile Weight**: 10.49 g / 162 gr
- **Velocity at 24 m**: 750 m/s / 2461 ft/s

**Energy at 24 m**

- Case: 2796 J
- Service Temperature: 56°C / 133°F
- Safety Temperature: 49°C / 120°F
- Barrel Twist: -

**Normative Reference**

- Brass: -54°C to +52°C
- -65°F to +125°F
- -54°C to +71°C
- -65°F to +160°F
Ball Reduced Range cartridge was designed for use in space constrained firing ranges and sensitive populated surroundings. By reducing the overall Safety Danger Zone, the technology allows for training exercises closer to the quarters. It is also applicable for operational use, while mitigating the risk of collateral damage. Suitable for all 12.7 x 99 mm weapons, it may be offered linked with Ball Reduced Range, in different configurations.

Trace Reduced Range cartridge was designed for use in space constrained firing ranges and sensitive populated surroundings. By reducing the overall Safety Danger Zone, the technology allows for training exercises closer to the quarters. It is also applicable for operational use, while mitigating the risk of collateral damage. It provides full luminosity trace up to 1500 m from the muzzle, visible in both day and night. Suitable for all 12.7 x 99 mm weapons, it may be offered linked with Ball Reduced Range, in different configurations.

Standard Blank cartridge for training. Used with Blank Firing Attachment, it can be adjusted to all automatic weapons to provide consistent and reliable functioning.
Heavy machine gun ball cartridge suitable for all 12.7 x 108 mm weapons. It may be offered linked with any trajectory-matched cartridges, such as Tracer, API and API-T, in different configurations.

**BALL**

- NORMATIVE REFERENCE: CBC STANDARD
- TIP IDENTIFICATION: BALL
- PROJECTILE TYPE: Ball
- PROJECTILE WEIGHT: 42 g / 648 gr
- VELOCITY AT 24 m: 882 m/s / 2894 ft/s

<table>
<thead>
<tr>
<th>ENERGY AT 24 m</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
<th>SAFETY TEMPERATURE</th>
<th>BARREL TWIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 15558 J</td>
<td>BRASS</td>
<td>≥65°C at +12°C</td>
<td>≥65°C at +12°F</td>
<td>-</td>
</tr>
</tbody>
</table>

Heavy machine gun ball cartridge suitable for all 12.7 x 108 mm weapons. It may be offered linked with any trajectory-matched cartridges, such as Ball, Tracer and API, in different configurations.

**TRACER**

- NORMATIVE REFERENCE: CBC STANDARD
- TIP IDENTIFICATION: RED TRACER
- PROJECTILE TYPE: Tracer
- PROJECTILE WEIGHT: 40 g / 617 gr
- VELOCITY AT 24 m: 617 gr

<table>
<thead>
<tr>
<th>ENERGY AT 24 m</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
<th>SAFETY TEMPERATURE</th>
<th>BARREL TWIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>∼ 1 050 J</td>
<td>BRASS</td>
<td>≥65°C at +12°C</td>
<td>≥65°C at +12°F</td>
<td>-</td>
</tr>
</tbody>
</table>

Heavy machine gun tracer cartridge, with full luminosity trace up to 1500 m from the muzzle, visible in both day and night. Suitable for all 12.7 x 108 mm weapons. It may be offered linked with any trajectory-matched cartridges, such as Ball, API and API-T, in different configurations.

**API**

- NORMATIVE REFERENCE: CBC STANDARD
- TIP IDENTIFICATION: ALUMINIUM ARMOR-PIERCING INCENDIARY
- PROJECTILE TYPE: Armor-Piercing Incendiary
- PROJECTILE WEIGHT: 40 g / 617 gr

<table>
<thead>
<tr>
<th>ENERGY AT 24 m</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
<th>SAFETY TEMPERATURE</th>
<th>BARREL TWIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1 533 J</td>
<td>BRASS</td>
<td>≥65°C at +12°C</td>
<td>≥65°C at +12°F</td>
<td>-</td>
</tr>
</tbody>
</table>

Heavy machine gun armor-piercing incendiary cartridge. Suitable for all 12.7 x 108 mm weapons, it may be offered linked with any trajectory-matched cartridges, such as Ball, Tracer and API, in different configurations.

**API-T**

- NORMATIVE REFERENCE: CBC STANDARD
- TIP IDENTIFICATION: RED AND ALUMINIUM ARMOR-PIERCING INCENDIARY TRACER
- PROJECTILE TYPE: Armor-Piercing Incendiary Tracer
- PROJECTILE WEIGHT: 40 g / 617 gr

<table>
<thead>
<tr>
<th>ENERGY AT 24 m</th>
<th>CASE</th>
<th>SERVICE TEMPERATURE</th>
<th>SAFETY TEMPERATURE</th>
<th>BARREL TWIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1 533 J</td>
<td>BRASS</td>
<td>≥65°C at +12°C</td>
<td>≥65°C at +12°F</td>
<td>-</td>
</tr>
</tbody>
</table>

Heavy machine gun armor-piercing incendiary tracer cartridge. Suitable for all 12.7 x 108 mm weapons, it may be offered linked with any trajectory-matched cartridges, such as Ball, Tracer and API, in different configurations.
**.223 REM 69 gr HPBT**

High precision cartridge for sniper application. Loaded with Sierra MatchKing bullets, the .223 REM HPBT 69 gr is designed for use in sniper rifles, as well as conventional weapons.

**.223 REM 77 gr HPBT**

High precision cartridge for long range sniper application. Loaded with Sierra MatchKing bullets, the .223 REM HPBT 77 gr is designed for use in sniper rifles, as well as conventional weapons.

**.308 WIN 168 gr HPBT**

High precision cartridge for sniper application. Loaded with Sierra MatchKing bullets, the .308 HPBT 168 gr is designed for use in sniper rifles, as well as conventional weapons.

**.308 WIN 175 gr HPBT**

High precision cartridge for long range sniper application. Loaded with Berger VLD bullets, the .308 HPBT 175 gr is designed for use in sniper rifles, as well as conventional weapons.

**.50 BALL SOLID**

Ball Solid Sniper is a high precision cartridge for long range shooting. It is designed for use in all 12.7 x 99 mm sniper rifles and guarantees precision of less than 1 MOA at 1000 m. It perforates 22 mm RHA steel plates at 100 m.

**.50 AP SOLID**

AP Solid Sniper is a high precision armor-piercing cartridge for long range shooting against protected targets. It is designed for use in all 12.7 x 99 mm sniper rifles and guarantees precision of less than 2 MOA at 1000 m. It perforates 22 mm RHA steel plates at 100 m.

**Ballistic Table**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>VELOCITY AT 24m</th>
<th>ENERGY AT 24m</th>
<th>BARREL LENGTH</th>
<th>BARREL TWIST</th>
<th>POINT OF IMPACT (cm)</th>
<th>PRECISION (MAX. MOA)</th>
<th>BALLISTIC COEFFICIENT</th>
<th>SECTIONAL DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>.223 REM 69 gr HPBT</td>
<td>860 / 2822</td>
<td>1653</td>
<td>24” TW7</td>
<td>-16.8 / -6.6</td>
<td>200 m: 1.518</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.223 REM 77 gr HPBT</td>
<td>800 / 2625</td>
<td>1597</td>
<td>24” TW7</td>
<td>-18.8 / -7.4</td>
<td>200 m: 1.518</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.308 WIN 168 gr HPBT</td>
<td>800 / 2625</td>
<td>3485</td>
<td>24” TW12</td>
<td>-17.9 / -7.0</td>
<td>200 m: 1.018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.308 WIN 175 gr HPBT</td>
<td>800 / 2625</td>
<td>3629</td>
<td>24” TW12</td>
<td>-17.7 / -7.0</td>
<td>200 m: 1.018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.50 BALL</td>
<td>770 gr SOLID</td>
<td>850 / 2789</td>
<td>45” TW15</td>
<td>-14.35 / -5.6</td>
<td>200 m: 1.018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.50 AP</td>
<td>774 gr SOLID</td>
<td>856 / 2808</td>
<td>45” TW15</td>
<td>-14.2 / -5.6</td>
<td>200 m: 1.018</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Ballistics are based on standard conditions.
2. Temperature: 21ºC (70ºF)
### 20 x 102 mm

**Training cartridge equivalent to M55A2. Suitable for use in M39 and M61 cannons. It may be offered linked with the TP-T version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46552C</td>
<td>Target Practice</td>
<td>58.5 g / 1200 gr</td>
<td>917 m/s (3000 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 4978 J BRASS YES -54°C to +21°C
- 4077 J NYLON YES -54°C to +21°C

### TP-T

**Traced training cartridge equivalent to M220. Suitable for use in M39 and M61 cannons. It may be offered linked with the TP version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46552A</td>
<td>Target Practice</td>
<td>98.5 g / 1520 gr</td>
<td>1000 m/s (3281 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 4956 J BRASS YES -54°C to +21°C
- 4077 J NYLON YES -54°C to +21°C

### API

**Armor-piercing incendiary operational cartridge equivalent to M53. Suitable for use in M39 and M61 cannons.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>Armor-Piercing Incendiary</td>
<td>100.5 g / 1551 gr</td>
<td>1000 m/s (3281 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 5199 J BRASS YES -54°C to +21°C
- 4077 J NYLON YES -54°C to +21°C

### HEI

**High explosive incendiary operational cartridge equivalent to M56A3. Suitable for use in M39 and M61 cannons.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>High Explosive Incendiary</td>
<td>100.5 g / 1551 gr</td>
<td>1000 m/s (3281 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 5199 J BRASS YES -54°C to +21°C
- 4077 J NYLON YES -54°C to +21°C

### 20 x 128 mm

**Training cartridge suitable for use in KAA-KAB cannons. It may be offered linked with the TP-T version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>Target Practice</td>
<td>125 g / 1929 gr</td>
<td>1035 m/s (3396 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 66952 J STEEL YES 21°C / 70°F

### TP-T

**Traced training cartridge suitable for use in KAA-KAB cannons. It may be offered linked with the TP version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>Target Practice Tracer</td>
<td>125 g / 1929 gr</td>
<td>1035 m/s (3396 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 66952 J STEEL YES 21°C / 70°F

### HEI

**High explosive incendiary operational cartridge suitable for use in KAA-KAB cannons. It may be offered linked with the HEI-T version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>High Explosive Incendiary</td>
<td>125 g / 1929 gr</td>
<td>1035 m/s (3396 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 66952 J STEEL YES 21°C / 70°F

### HEI-T

**High explosive incendiary tracer operational cartridge suitable for use in KAA-KAB cannons. It may be offered linked with the HEI version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>High Explosive Incendiary Tracer</td>
<td>125 g / 1929 gr</td>
<td>1035 m/s (3396 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 66952 J STEEL YES 21°C / 70°F

### HEIT-SD

**High explosive incendiary tracer, self-destructive operational cartridge suitable for use in KAA-KAB cannons. It may be offered linked with the HEI version, in different configurations.**

<table>
<thead>
<tr>
<th>Normative Reference</th>
<th>Projectile Type</th>
<th>Projectile Weight</th>
<th>Velocity AT 7.5 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>High Explosive Incendiary Self-Destructive</td>
<td>125 g / 1929 gr</td>
<td>1035 m/s (3396 ft/s)</td>
</tr>
</tbody>
</table>

**Energy AT 7.5 m**
- CASE: WATERTIGHTNESS
- SERVICE TEMPERATURE

- 66952 J STEEL YES 21°C / 70°F

---

1. Temperature: 21ºC (70ºF) | 2. Test Barrel Length: 1361 mm (53.4/7”)

---

**CBC DEFENSE.COM**
Training cartridge suitable for use in DEFA automatic cannon. It may be offered linked with the TP-T version, in different configurations.

**TP**

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 7.5 m</th>
<th>ENERGY AT 7.5 m</th>
<th>CASE</th>
<th>WATERTIGHTNESS</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>TP</td>
<td>240 g / 3781 gr</td>
<td>810 m/s / 2657 ft/s</td>
<td>80372 J</td>
<td>STEEL</td>
<td>YES</td>
<td>-54°C to +52°C</td>
</tr>
<tr>
<td></td>
<td>TP-TRACER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-65°F to +125°F</td>
</tr>
</tbody>
</table>

**TP-T**

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 7.5 m</th>
<th>ENERGY AT 7.5 m</th>
<th>CASE</th>
<th>WATERTIGHTNESS</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>TP-TRACER</td>
<td>245 g / 3791 gr</td>
<td>810 m/s / 2657 ft/s</td>
<td>80372 J</td>
<td>STEEL</td>
<td>YES</td>
<td>-54°C to +52°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-65°F to +125°F</td>
</tr>
</tbody>
</table>

**API**

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 7.5 m</th>
<th>ENERGY AT 7.5 m</th>
<th>CASE</th>
<th>WATERTIGHTNESS</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>API</td>
<td>275 g / 4244 gr</td>
<td>780 m/s / 2559 ft/s</td>
<td>83655 J</td>
<td>STEEL</td>
<td>YES</td>
<td>-54°C to +52°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-65°F to +125°F</td>
</tr>
</tbody>
</table>

**HEI-SD**

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>PROJECTILE TYPE</th>
<th>PROJECTILE WEIGHT</th>
<th>VELOCITY AT 7.5 m</th>
<th>ENERGY AT 7.5 m</th>
<th>CASE</th>
<th>WATERTIGHTNESS</th>
<th>SERVICE TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-C-46578D</td>
<td>HEI-SD</td>
<td>342 g / 3705 gr</td>
<td>810 m/s / 2657 ft/s</td>
<td>79388 J</td>
<td>STEEL</td>
<td>YES</td>
<td>-54°C to +52°C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-65°F to +125°F</td>
</tr>
</tbody>
</table>

**Traced training cartridge suitable for use in Bushmaster II Mk44 and Mauser MK30 weapon systems.**

**High explosive incendiary operational cartridge suitable for use in Bushmaster and Mauser MK30 weapon systems.**

---

1 Temperature: 21ºC (70ºF) | 2 Test Barrel Length: 1400 mm (55")

*CBC Defense*
**40 x 53 mm HIGH VELOCITY AMMUNITION**

**TP**
- Training cartridge suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the TP-T version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**TP-T**
- Traced training cartridge suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the TP version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
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<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**TP-DM**
- Modern training cartridge with highly visible impact signature, designed to provide realistic training exercises during daytime without risk of unexploded ordnance and range fires. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the TP-DM-T version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**TP-DM-T**
- Modern traced training cartridge with highly visible impact signature, designed to provide realistic training exercises during daytime without risk of unexploded ordnance generation. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the TP-DM version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**HE**
- High explosive operational cartridge with blast and fragmentation capabilities, providing a lethal radius of 5 meters. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the HEDP version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**HE-SD**
- High explosive operational cartridge with self-destruct capability with reliability over 99%. Projectile blast and fragmentation effect provides a lethal radius of 5 meters. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the HEDP-SD version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**HEDP**
- High explosive dual purpose operational cartridge provides simultaneously a lethal blast and fragment radius of 5 meters and armor penetration greater than 50 mm RHA. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the HE version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

**HEDP-SD**
- High explosive dual purpose operational cartridge with self-destruct capability with reliability over 99%. Projectile blast and fragmentation effect provides a lethal radius of 5 meters and armor penetration greater than 50 mm RHA. Suitable for use in Mk19 Mod 3, H&K GMG and other Automatic Grenade Launchers. It may be offered linked with the HE-SD version, in different configurations.

<table>
<thead>
<tr>
<th>NORMATIVE REFERENCE</th>
<th>CARTRIDGE LENGTH</th>
<th>CARTRIDGE WEIGHT</th>
<th>MUZZLE VELOCITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC25-S6/D3 - SE0/10/17</td>
<td>112 mm / 4.41 inch</td>
<td>35 g / 1.23 oz</td>
<td>242 m/s / 794 ft/s</td>
</tr>
</tbody>
</table>

1. Temperature: 21ºC (70ºF) | 2. Test Barrel Length: 439 cm (17")
CBC Reduced Range (RR) ammunition was designed for tactical operations in sensitive populated surrounding and for training in space-constrained firing ranges. By reducing the overall Safety Danger Zone (SDZ), the technology mitigates risk of collateral damage and provides greater logistic efficiency and range availability.

CBC .50 cal RR Ball and Tracer comply with 7.62 x 51 mm M80 safety template, with maximum range not exceeding 3,500 m, or half of the maximum range comparing to the standard .50 NATO Ball ammunition. Both RR Ball and Tracer have matching ballistic trajectories with standard .50 NATO Ball up to 900 m (figure 1).

The product performance is achieved due to a special aerodynamic bullet design, that causes the projectile’s spin velocity to decrease during flight, progressively reducing its gyroscopic and dynamic stability.

The CBC .50 cal RR cartridges were successfully tested against the complete NATO qualification program and have been fielded by several NATO and allied countries.

Figure 1 - Maximum range comparison between .50 caliber (RR) and .50 NATO caliber.

**ADVANTAGES**

- Applicable for tactical operations, decreasing risk of collateral damage;
- Solid projectile can penetrate light barriers and unarmored structures in urban combat scenarios;
- Allows training in smaller firing ranges (7.62 x 51 mm M80 Surface Danger Zone);
- Simultaneous training by multiple units at the same training facility, when space permits;
- Logistics efficiency in allowing training to occur closer to the quarters, reducing costs;
- Trace visibility up to 1500 meters;
- No weapon modification or conversion kit required;
- Compliant with NATO Small Caliber MOPI.
CBC IR Tracer ammunition was designed for night operations, granting the combat forces a stealth advantage. The bullet trace is completely invisible to the naked eye and only visible with the use of Night Vision Devices (NVDs).

The technology gives the shooter higher engagement effectiveness since the target visualization is not obfuscated by the halo effect. With the use of a special propellant that virtually eliminates muzzle flash, it allows a tactical upper hand by keeping the shooter’s position unexposed.

The trace performance is achieved due to a special tracer composition that keeps the wave length emission within the IR spectrum, therefore visible only through NVDs – GEN 3 and beyond.

CBC IR Tracer complies with STANAGs 2310 (for the 7.62 mm) and 4172 (for the 5.56 mm), as well as with NATO (Multi-caliber MOPI Standard). The ballistic trajectories for both 5.56 and 7.62 IR match NATO reference cartridges, making them interchangeable with regular tracers.

**ADVANTAGES**
- Invisible to the naked eye;
- Trace visible from the shooter’s position and only through night-vision devices (NVDs) – GEN 3 and beyond;
- Reduced halo effect, enhancing engagement capability;
- Shooter’s position remains unexposed;
- Fully compliant with NATO MOPI requirements;
- No weapon modification or conversion kit is required.

**REduced Signature**

The reduced signature advantage is granted by the special energetic components’ properties, which ensure that the trace remains invisible to the naked eye and with virtually zero muzzle flash.

**HALO EFFECT**

Differently from the standard tracer ammunition, CBC IR Tracer ammunition allows the fighter to clearly see the bullet’s trajectory without super exposing the NVD sensors (image intensifier tube), problem also known as “halo effect” – a bright spot that can be several times bigger than the actual target, partially blocking the shooter’s line of sight, compromising accuracy and combat effectiveness.

**COMPOSITION**

<table>
<thead>
<tr>
<th>1</th>
<th>PROJECTILE 5.56 mm</th>
<th>COPPER CLAD STEEL JACKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>PROJECTILE 7.62 mm</td>
<td>GILDING/CLAD METAL JACKET</td>
</tr>
<tr>
<td>3</td>
<td>TRACER COMPOSITION</td>
<td>LOW SPECTRUM IR TECHNOLOGY</td>
</tr>
<tr>
<td>4</td>
<td>CASE</td>
<td>BRASS (Cu70Zn30) (UNS 26000)</td>
</tr>
<tr>
<td>5</td>
<td>PROPELLANT</td>
<td>DOUBLE BASE, REACH COMPLIANT</td>
</tr>
<tr>
<td>6</td>
<td>PRIMER</td>
<td>PERCUSSION, BISHER TYPE, CRIMPED AND SEALED</td>
</tr>
</tbody>
</table>

Fully compatible with all NATO nominated weapons or equivalents without the need of any modifications or auxiliary equipment.

Footage of CBC 7.62 IR Tracer testing in cooperation with Brazilian Air Force Black Hawk (UH-60) Helicopter armed with M134 Gatling gun “Minigun”.

**REFERENCES**

CBC IR Tracer complies with STANAGs 2310 (for the 7.62 mm) and 4172 (for the 5.56 mm), as well as with NATO (Multi-caliber MOPI Standard). The ballistic trajectories for both 5.56 and 7.62 IR match NATO reference cartridges, making them interchangeable with regular tracers.
CBC 5.56 x 45 mm SAT Improved Performance combines superior hard target penetration with better terminal effects than conventional 5.56 NATO Ball ammunition. Loaded with a lead-free projectile the 5.56 SAT provides the infantry more consistent lethality at close-and-long-range engagements, up to 600 meters.

The improved performance is a result of the projectile capability of penetrating barriers with higher effectiveness and carrying enough residual energy to incapacitate soft targets. In direct shots, the projectile construction favors fragmentation and increases lethality.

Although lighter, the 5.56 SAT outperforms the 7.62 Ball M80 in both hard and soft targets. The 5.56 SAT will completely perforate a 9.5 mm thick mild steel plate at a distance of 385 meters from muzzle, still having enough residual energy to guarantee effective terminal performance.

Designed to comply with the STANAG 4172 and NATO (Multi-caliber MOP Standard), CBC 5.56 x 45 mm SAT ballistic trajectories fully match NATO reference cartridges.

**ADVANTAGES**

- Improved hard target performance and increased terminal effect against soft targets – compared to 5.56 x 45 mm NATO Ball;
- Effective against a wide variety of targets;
- Increases the engagement range to distances up to 600 m;
- Lead free projectile;
- Bullet coating for reducing barrel wear;
- No weight increase compared to 5.56 x 45 mm NATO Ball;
- Fully compliant with NATO MOP requirements;
- No weapon modification or conversion kit is required.

**COMPARISON CHART**

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>NATO BALL</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARTRIDGE LENGTH (mm)</td>
<td>56.70 – 57.40</td>
<td>56.70 – 57.40</td>
</tr>
<tr>
<td>BULLET WEIGHT (g)</td>
<td>3.9 – 4.1</td>
<td>3.9 – 4.1</td>
</tr>
<tr>
<td>SLUG</td>
<td>LEAD</td>
<td>COPPER</td>
</tr>
<tr>
<td>PENETRATOR</td>
<td>HARDENED STEEL</td>
<td>HIGH HARDENED STEEL</td>
</tr>
<tr>
<td>PENETRATION</td>
<td>4.75 mm MILD STEEL PLATE (1010 OR 1020) BETWEEN 55 AND 75 HRB AT 455 m</td>
<td>9.5 mm MILD STEEL PLATE (1010 OR 1020) BETWEEN 55 AND 75 HRB AT 385 m</td>
</tr>
</tbody>
</table>

**COMPOSITION**

1. **PROJECTILE**: COPPER SOLID BODY EXPOSED STEEL CORE LEAD FREE
2. **PENETRATION PERFORMANCE**: 9.5 mm STEEL PLATE (SAE 1010 OR 1020 | 65 HRB – 75 HRB), AT 385 m FROM MUZZLE
3. **CASE**: BRASS (CuZn40) (UNS 26000)
4. **PROPELLANT**: DOUBLE BASE, REACH COMPLIANT
5. **PRIMER**: PERCUSSION, BOXER TYPE, CRIMPED AND SEALED

**Penetration Performance**

- Fully compatible with all NATO nominated weapons or equivalents without the need of any modifications or auxiliary equipment.
LEARN MORE ABOUT CBC DEFENSE,
GLOBAL LEADER IN THE AMMUNITION SEGMENT

STATUS

- Among the three largest ammunition producers in the World
- One of the main suppliers to NATO and allied forces
- Operations in Brazil, Germany, USA and Czech Republic

GLOBAL PRESENCE

- Present in more than 100 countries
- Serving military forces in over 50 countries
- Preferred supplier to several private and military OEMs, worldwide

PRODUCTION

- Largest private manufacturer of .50 ammunition
- Pioneer ammunition producer with LEAN system
- Fully integrated production site and self-sufficient in technology
- Flexible production lines, convertible to different calibers

HIGHLIGHTS

GLOBAL PRESENCE