



**ARWEN**  
LESS LETHAL

# ARWEN LESS LETHAL

MUNITIONS SPECIFICATION SHEETS

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## 37mm ARWEN® AR-1 Less Lethal Munitions Overview

### 37mm ARWEN® AR-1 Less Lethal Impact Munitions

AR-1 Impact Batons are currently offered in three variants and are colour coded for rapid identification as to standard and non-standard energies. The **AR-1** (standard energy) baton is green with black rotating bands while the **AR-1-ME** (medium energy) and the **AR-1-RE** (reduced energy) batons are black with black rotating bands.

37mm ARWEN® AR-1 Batons are manufactured using state of the art high quality proprietary engineered resins and are produced utilizing computer controlled high pressure injection moulding equipment. The rotating bands are injection over-moulded onto the baton body which gives the most consistent and rotationally stable Impact Batons available.

37mm ARWEN® AR-1 Less lethal Munitions utilize high quality pressure tested aluminum cartridge cases which are manufactured on the latest computer controlled equipment. These cases are black anodized for additional durability and corrosion resistance. They are also individually pressure tested to 70 Bar to ensure the integrity of every case.

The ARWEN® Propellant Charge is comprised of a custom ARWEN® brass cartridge case containing a quantity of pyrotechnic powder which is sealed to ensure resistance to moist conditions. This propellant charge is secured into the base of the 37mm ARWEN® Cartridge case. This system allows for safe, efficient and cost effective reloading for training purposes.

#### **PERFORMANCE**

	<b><u>AR-1</u></b>	<b><u>AR-1-AIR</u></b>	<b><u>AR-1-AIR</u></b>
Projectile Weight	80gm +-1gm	80gm +-1gm	80gm +-1gm
Muzzle Velocity (avg.)	74ms/242fps	60ms/200fps	50ms/164fps
Kinetic Energy	219J	114J	100J
Foot Pound Force	162 FPF	106 FPF	74 FPF
Net Explosive Quantity	0.58g	0.55g	0.38g
Cartridge Dimensions	40mm x 10mm	40mm x 110mm	40mm x 110mm
Total Weight	145g +-1g	145g +-1g	145g +-1g
Minimum Operational Range	0m	0m	0m
Maximum Operational Range	100m	50m	30m



POC\_SPEC\_AR-1

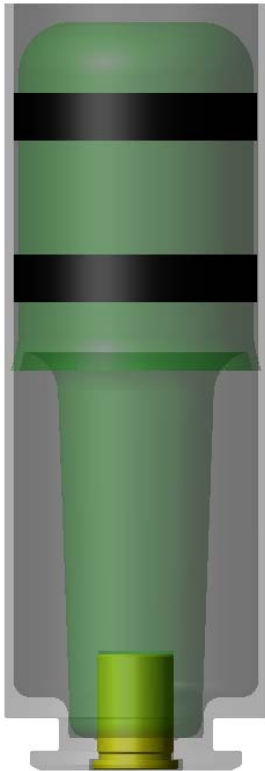
## Product Specification Sheet

Revision G 2016-08-23

All specifications are average and are subject to change without notice.

## AR-1

## ARWEN® Impact Baton, Standard Energy



## PHYSICAL &amp; OPERATIONAL

➤ <b>Model No.</b>	AR-1
➤ <b>Description</b>	ARWEN® Impact Baton, Standard Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	145g ± 1g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Bright Green
➤ <b>Net Explosive Quantity</b>	0.61g
➤ <b>Muzzle Velocity</b>	74m/s (242fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	219J (158ft-lbf)
➤ <b>Range</b>	100m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

## SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>Hazard Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box) 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

POC\_SPEC\_AR-1-RE

Revision G 2016-08-23

## Product Specification Sheet

All specifications are average and are subject to change without notice.

### AR-1-RE

### ARWEN® Impact Baton, Reduced Energy



#### PHYSICAL & OPERATIONAL

➤ <b>Model No.</b>	AR-1-RE
➤ <b>Description</b>	ARWEN® Impact Baton, Reduced Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	145g ± 1g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Black
➤ <b>Net Explosive Quantity</b>	0.41g
➤ <b>Muzzle Velocity</b>	50m/s (164fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	100J (74ft-lbf)
➤ <b>Range</b>	50m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>UN Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box)
➤ <b>Total Package Weight</b>	75 Cartridges in metal drum Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specification
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

POC\_SPEC\_AR-1-AIR

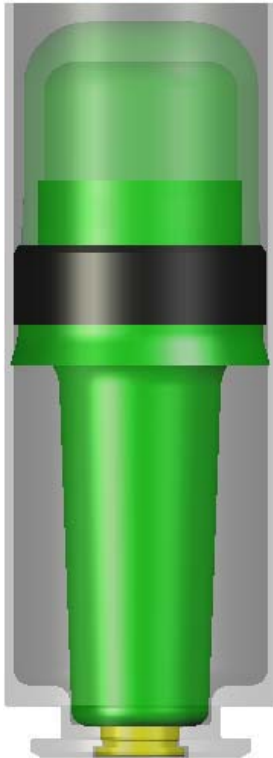
Revision G 2016-08-23

## Product Specification Sheet

All specifications are average and are subject to change without notice.

### AR-1-AIR

#### ARWEN® AIR Impact Baton, Standard Energy



#### PHYSICAL & OPERATIONAL

➤ <b>Model No.</b>	AR-1-AIR
➤ <b>Description</b>	ARWEN® AIR Impact Baton, Standard Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	140g ± 2g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Bright Green
➤ <b>Net Explosive Quantity</b>	0.61g
➤ <b>Muzzle Velocity</b>	74m/s (242fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	219J (158ft-lbf)
➤ <b>Range</b>	100m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box) 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

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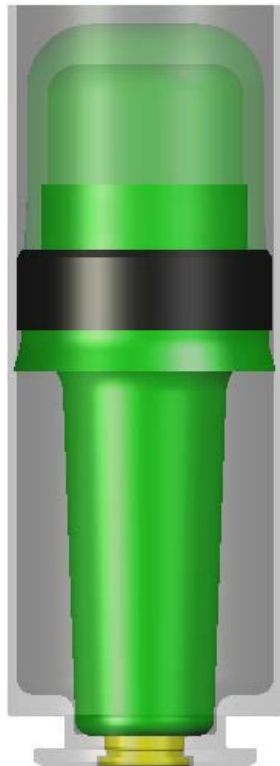


POC\_SPEC\_AR-1-AIR-RE

## Product Specification Sheet

Revision G 2016-08-23

All specifications are average and are subject to change without notice.

**AR-1-AIR-RE**  
**ARWEN® AIR Impact Baton, Reduced Energy****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-1-AIR-RE
➤ <b>Description</b>	ARWEN® AIR Impact Baton, Reduced Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	140g ± 2g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Bright Green
➤ <b>Net Explosive Quantity</b>	0.41g
➤ <b>Muzzle Velocity</b>	50m/s (136fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	100J (74ft-lbf)
➤ <b>Range</b>	50m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box) 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

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POC\_SPEC\_AR-2-CS

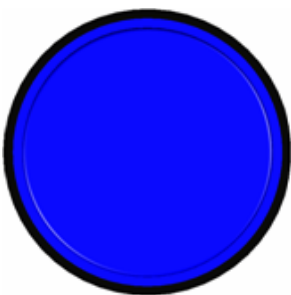
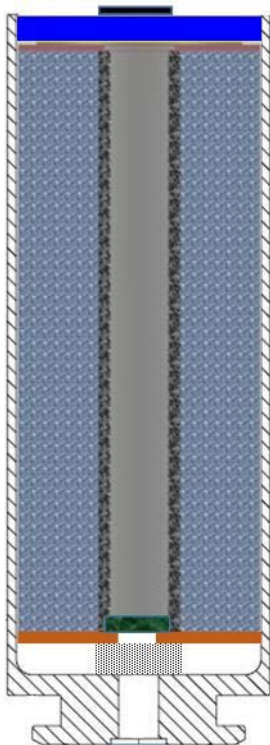
## Product Specification Sheet

Revision G 2016-10-28

All specifications are average and are subject to change without notice.

## AR-2-CS

### ARWEN® Pyrotechnic Smoke, Standard Energy CS Irritant, Smoke



#### PHYSICAL & OPERATIONAL

➤ <b>Model No.</b>	AR-2-CS
➤ <b>Description</b>	ARWEN® Pyrotechnic Smoke, Standard Energy CS Irritant, Smoke
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	173g +/-2g
➤ <b>Projectile Material</b>	Aluminum Canister containing Pyrotechnic compound
➤ <b>Projectile Weight</b>	102g +/-1g
➤ <b>Net Explosive Quantity</b>	2.3g
➤ <b>Muzzle Velocity</b>	
➤ <b>Range</b>	50~75m depending on Barrel Angle
➤ <b>Discharge Time</b>	2.5 ~ 3 minuets
➤ <b>Irritant Agent</b>	CS Smoke (2-chlorobenzalmalononitrile) $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
➤ <b>Net Irritant Agent</b>	80 ± 1g
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear-Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G, Toxic, Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges
➤ <b>Total Package Weight</b>	Box: 2.5kg (12 Cartridges) Drum: 15.4kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

POC\_SPEC\_AR-3-CS-ME

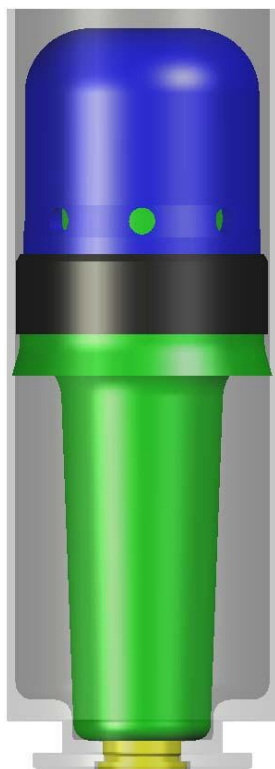
## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

## AR-3-CS

## ARWEN® Valve Impact Baton, CS Irritant



## PHYSICAL &amp; OPERATIONAL

- **Model No.** AR-3-CS-ME
- **Description** ARWEN® Valve Impact Baton, Medium Energy CS Irritant
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 145g ± 1g
- **Projectile Weight** 78g ± 1g
- **Projectile Color** Blue Valve Cap – Green Baton Base
- **Net Explosive Quantity** 0.61g
- **Muzzle Velocity** 74m/s (242fps) Average – ARWEN 37 Barrel
- **Kinetic Energy at Muzzle** 219j (158ft-lbf)
- **Range** 75m
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems
- **Irritant Agent** CS Dust (2-chlorobenzalmalononitrile)  
 $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
- **Net Irritant Agent** 4 ± 1 g
- **Waterproof** Lacquer coated primer, and sealed propellant cartridge

## SHIPPING INFORMATION

- **UN Number** UN0301
- **Proper Shipping Name** Ammunition, Tear Producing
- **Hazard Class** 1.4G (6.1) (8)
- **Labels Required** Explosive, 1.4G, Toxic, Corrosive
- **Quantity Per Package** 12 Cartridges (2-4 boxes in master box)  
75 Cartridges in metal drum
- **Total Package Weight** Box: 2.04kg (12 Cartridges)  
Drum: 13.6kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040328

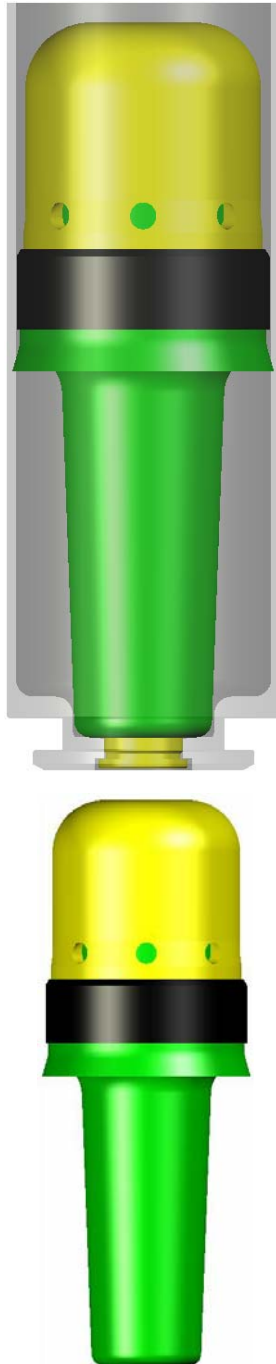
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POC\_SPEC\_AR-3-P

## Product Specification Sheet

Revision G 2016-08-23

All specifications are average and are subject to change without notice.

**AR-3-P****ARWEN® Valve Impact Baton, Standard Energy – Inert Powder****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-3-P
➤ <b>Description</b>	ARWEN® Valve Impact Baton, Standard Energy – Inert Powder
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	145g ± 1g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Yellow Valve Cap – Green Baton Base
➤ <b>Net Explosive Quantity</b>	0.61g
➤ <b>Muzzle Velocity</b>	74m/s (242fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	219J (158ft-lbf)
➤ <b>Range</b>	100m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Irritant Agent</b>	N/A – Inert Powder, 4 ±1 g
➤ <b>Net Irritant Agent</b>	N/A
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>Hazard Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box)
➤ <b>Total Package Weight</b>	75 Cartridges in metal drum Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

POC\_SPEC\_AR-3-OC-RE

## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

**AR-3-OC-RE****ARWEN® Valve Impact Baton, Reduced Energy OC Irritant****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-3-OC-RE
➤ <b>Description</b>	ARWEN® Valve Impact Baton, Reduced Energy OC Irritant
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	145g ± 1g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Orange Valve Cap – Green Baton Base
➤ <b>Net Explosive Content</b>	0.41g
➤ <b>Muzzle Velocity</b>	50m/s (164fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	100J (74ft-lbf)
➤ <b>Range</b>	50m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Irritant Agent</b>	OC Blend – 10% OC (oleoresin capsicum)
➤ <b>Net Irritant Agent</b>	4 ± 1 g
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G, Toxic, Corrosive
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box) 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

POC\_SPEC\_AR-3-OC

## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

**AR-3-OC****ARWEN® Valve Impact Baton, Standard Energy OC Irritant****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-3-OC
➤ <b>Description</b>	ARWEN® Valve Impact Baton, Standard Energy OC Irritant
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	145g ± 1g
➤ <b>Projectile Weight</b>	78g ± 1g
➤ <b>Projectile Color</b>	Orange Valve Cap – Green Baton Base
➤ <b>Net Explosive Content</b>	0.61g
➤ <b>Muzzle Velocity</b>	74m/s (242fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	219J (158ft-lbf)
➤ <b>Range</b>	100m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Irritant Agent</b>	OC Blend – 10% OC (oleoresin capsicum)
➤ <b>Net Irritant Agent</b>	4 ± 1 g
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G, Toxic, Corrosive
➤ <b>Quantity Per Package</b>	12 Cartridges (2-4 boxes in master box) 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.04kg (12 Cartridges) Drum: 13.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

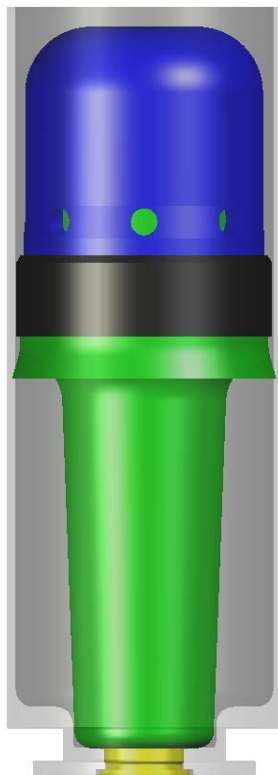


POC\_SPEC\_AR-3-CS-RE

## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

**AR-3-CS-RE****ARWEN® Valve Impact Baton, Reduced Energy CS Irritant****PHYSICAL & OPERATIONAL**

- **Model No.** AR-3-CS-RE
- **Description** ARWEN® Valve Impact Baton, Reduced Energy CS Irritant
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 145g ± 1g
- **Projectile Weight** 78g ± 1g
- **Projectile Color** Blue Valve Cap – Green Baton Base
- **Net Explosive Quantity** 0.41g
- **Muzzle Velocity** 50m/s (164fps) Average – ARWEN 37 Barrel
- **Kinetic Energy at Muzzle** 100J (74ft-lbf)
- **Range** 50m
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems
- **Irritant Agent** CS Dust (2-chlorobenzalmalononitrile)  
 $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
- **Net Irritant Agent** 4 ± 1 g
- **Waterproof** Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

- **UN Number** UN0301
- **Proper Shipping Name** Ammunition, Tear Producing
- **Hazard Class** 1.4G (6.1) (8)
- **Labels Required** Explosive, 1.4G, Toxic, Corrosive
- **Quantity Per Package** 12 Cartridges (2-4 boxes in master box)  
75 Cartridges in metal drum
- **Total Package Weight** Box: 2.04kg (12 Cartridges)  
Drum: 13.6kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040328

POC\_SPEC\_AR-3-CS-ME

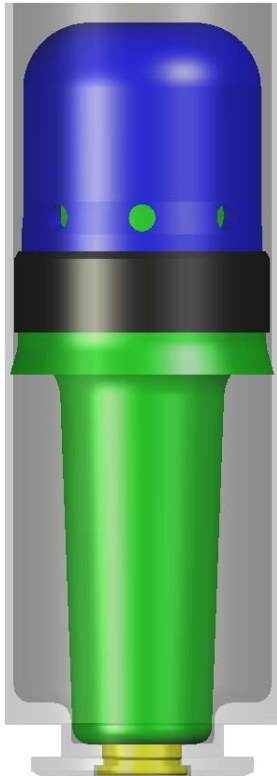
## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

## AR-3-CS-ME

## ARWEN® Valve Impact Baton, Medium Energy CS Irritant



## PHYSICAL &amp; OPERATIONAL

- **Model No.** AR-3-CS-ME
- **Description** ARWEN® Valve Impact Baton, Medium Energy CS Irritant
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 145g ± 1g
- **Projectile Weight** 78g ± 1g
- **Projectile Color** Blue Valve Cap – Green Baton Base
- **Net Explosive Quantity** 0.58g
- **Muzzle Velocity** 61m/s (200fps) Average – ARWEN 37 Barrel
- **Kinetic Energy at Muzzle** 144J (106ft-lbf)
- **Range** 75m
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems
- **Irritant Agent** CS Dust (2-chlorobenzalmalononitrile)  
 $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
- **Net Irritant Agent** 4 ± 1 g
- **Waterproof** Lacquer coated primer, and sealed propellant cartridge

## SHIPPING INFORMATION

- **UN Number** UN0301
- **Proper Shipping Name** Ammunition, Tear Producing
- **Hazard Class** 1.4G (6.1) (8)
- **Labels Required** Explosive, 1.4G, Toxic, Corrosive
- **Quantity Per Package** 12 Cartridges (2-4 boxes in master box)  
75 Cartridges in metal drum
- **Total Package Weight** Box: 2.04kg (12 Cartridges)  
Drum: 13.6kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040328

POC\_SPEC\_AR-4-Y

## Product Specification Sheet

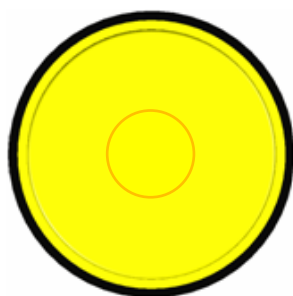
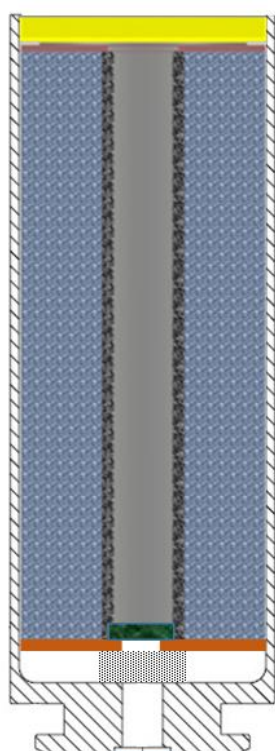
Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-Y

### ARWEN® Pyrotechnic Yellow Smoke, Standard Energy

#### PHYSICAL & OPERATIONAL



➤ <b>Model No.</b>	AR-4-Y
➤ <b>Description</b>	ARWEN® Pyrotechnic Yellow Smoke, Standard Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	173g +-2g
➤ <b>Projectile Material</b>	Aluminum Canister containing Pyrotechnic compound
➤ <b>Projectile Weight</b>	102g +-1g
➤ <b>Net Explosive Quantity</b>	2.3g
➤ <b>Muzzle Velocity</b>	
➤ <b>Range</b>	50~75m depending on Barrel Angle
➤ <b>Discharge Time</b>	2.5 ~ 3 minutes
➤ <b>Irritant Agent</b>	N/A Safe Smoke
➤ <b>Net Irritant Agent</b>	N/A
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

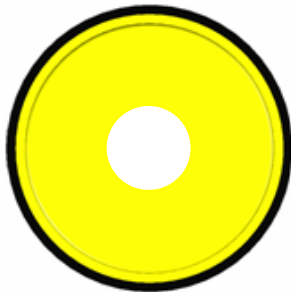
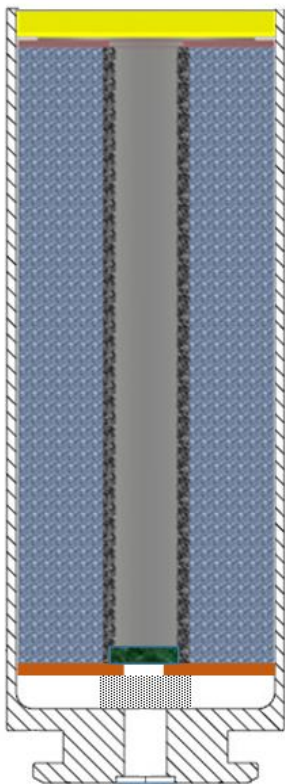
➤ <b>UN Number</b>	UN0303
➤ <b>Proper Shipping Name</b>	Ammunition, Smoke
➤ <b>Hazard Class</b>	1.4G (8)
➤ <b>Labels Required</b>	Explosive, 1.4G; Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges
➤ <b>Total Package Weight</b>	Box: 2.27kg (12 Cartridges) Drum: 14.9kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040329

POC\_SPEC\_AR-4-W

## Product Specification Sheet

Revision G 2016-09-08

All specifications are average and are subject to change without notice.

**AR-4-W**  
**ARWEN® Pyrotechnic White Smoke, Standard Energy****PHYSICAL & OPERATIONAL**

- **Model No.** AR-4-W
- **Description** ARWEN® Pyrotechnic White Smoke, Standard Energy
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 173g +-2g
- **Projectile Material** Aluminum Canister containing Pyrotechnic compound
- **Projectile Weight** 102g +-1g
- **Net Explosive Quantity** 2.3g
- **Muzzle Velocity**
- **Range** 50~75m depending on Barrel Angle
- **Discharge Time** 2.5 ~ 3 minutes
- **Irritant Agent** N/A Safe Smoke
- **Net Irritant Agent** N/A
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

**SHIPPING INFORMATION**

- **UN Number** UN0303
- **Proper Shipping Name** Ammunition, Smoke
- **Hazard Class** 1.4G (8)
- **Labels Required** Explosive, 1.4G; Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges
- **Total Package Weight** Box: 2.27kg (12 Cartridges)  
Drum: 14.9kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **UN DoT Ref. No.** EX2016040329

POC\_SPEC\_AR-4-R

## Product Specification Sheet

Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-R

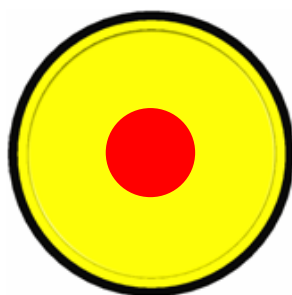
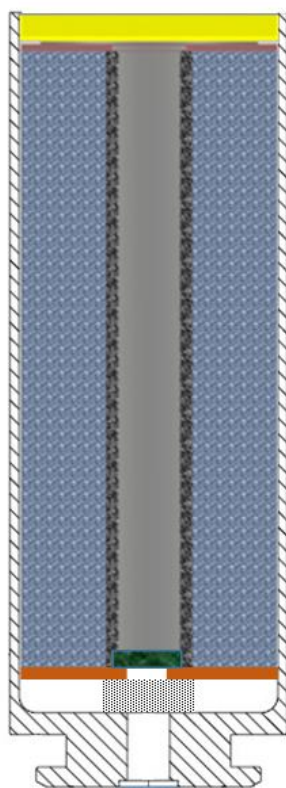
### ARWEN® Pyrotechnic Red Smoke, Standard Energy

#### PHYSICAL & OPERATIONAL

- **Model No.** AR-4-R
- **Description** ARWEN® Pyrotechnic Red Smoke, Standard Energy
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 173g ±2g
- **Projectile Material** Aluminum Canister containing Pyrotechnic compound
- **Projectile Weight** 102g ±1g
- **Net Explosive Quantity** 2.3 g
- **Muzzle Velocity**
- **Range** 50~75m depending on Barrel Angle
- **Discharge Time** 2.5 ~ 3 minutes
- **Irritant Agent** N/A Safe Smoke
- **Net Irritant Agent** N/A
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

- **UN Number** UN0303
- **Proper Shipping Name** Ammunition, Smoke
- **Hazard Class** 1.4G (8)
- **Labels Required** Explosive, 1.4G, Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges in metal drum
- **Total Package Weight** Box: 2.27kg (12 Cartridges)  
Drum: 14.9kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040329





POC\_SPEC\_AR-4-V

## Product Specification Sheet

Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-V

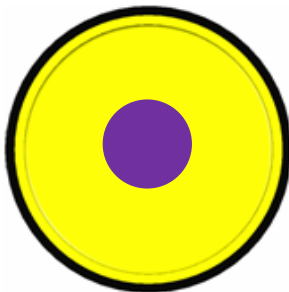
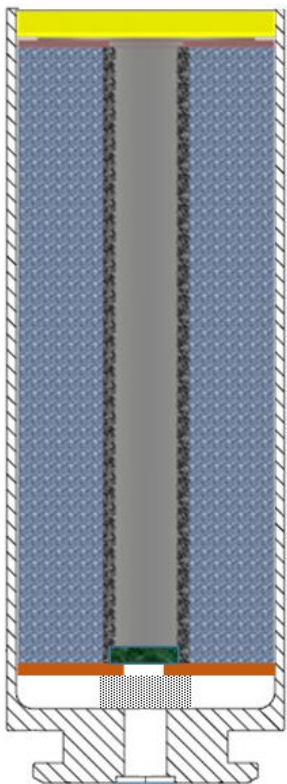
### ARWEN® Pyrotechnic Violet Smoke, Standard Energy

#### PHYSICAL & OPERATIONAL

- **Model No.** AR-4-V
- **Description** ARWEN® Pyrotechnic Violet Smoke, Standard Energy
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 173g +-2g
- **Projectile Material** Aluminum Canister containing Pyrotechnic compound
- **Projectile Weight** 102g +-1g
- **Net Explosive Quantity** 2.3g
- **Muzzle Velocity**
- **Range** 50~75m depending on Barrel Angle
- **Discharge Time** 2.5 ~ 3 minutes
- **Irritant Agent** N/A Safe Smoke
- **Net Irritant Agent** N/A
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

- **UN Number** UN0303
- **Proper Shipping Name** Ammunition, Smoke
- **Hazard Class** 1.4G (8)
- **Labels Required** Explosive, 1.4G; Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges
- **Total Package Weight** Box: 2.27kg (12 Cartridges)  
Drum: 14.9kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040329



POC\_SPEC\_AR-4-O

## Product Specification Sheet

Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-O

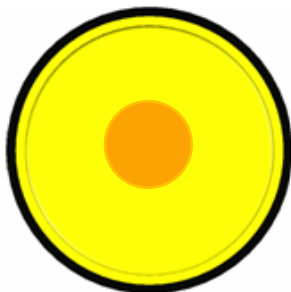
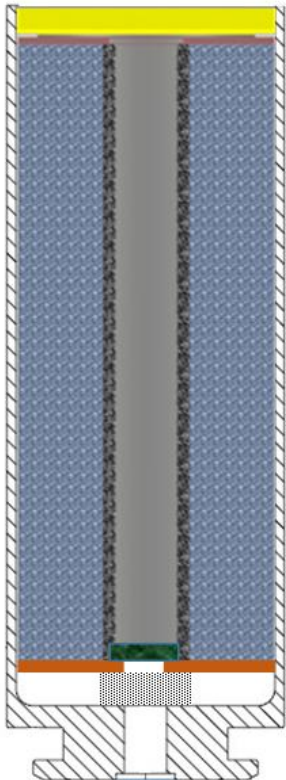
### ARWEN® Pyrotechnic Orange Smoke, Standard Energy

#### PHYSICAL & OPERATIONAL

- **Model No.** AR-4-O
- **Description** ARWEN® Pyrotechnic Orange Smoke, Standard Energy
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 173g +-2g
- **Projectile Material** Aluminum Canister containing Pyrotechnic compound
- **Projectile Weight** 102g +-1g
- **Net Explosive Quantity** 2.3 g
- **Muzzle Velocity**
- **Range** 50~75m depending on Barrel Angle
- **Discharge Time** 2.5 ~ 3 minutes
- **Irritant Agent** N/A Safe Smoke
- **Net Irritant Agent** N/A
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

- **UN Number** UN0303
- **Proper Shipping Name** Ammunition, Smoke
- **Hazard Class** 1.4G (8)
- **Labels Required** Explosive, 1.4G; Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges
- **Total Package Weight** Box: 2.27kg (12 Cartridges)  
Drum: 14.9kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock  
Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040329



POC\_SPEC\_AR-4-G

## Product Specification Sheet

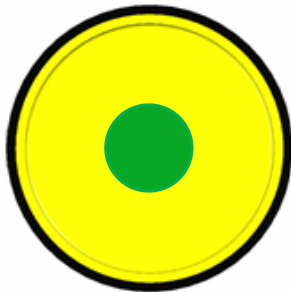
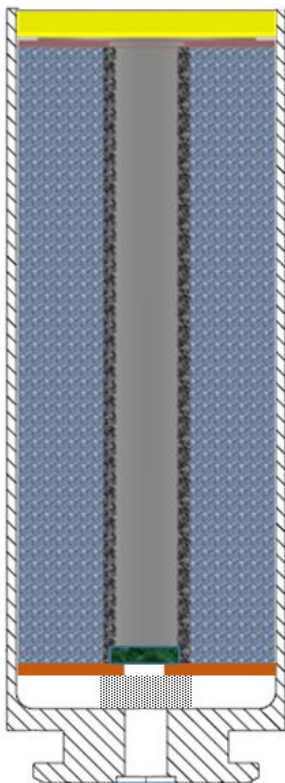
Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-G

### ARWEN® Pyrotechnic Green Smoke, Standard Energy

#### PHYSICAL & OPERATIONAL



- **Model No.** AR-4-G
- **Description** ARWEN® Pyrotechnic Green Smoke, Standard Energy
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 173g +/-2g
- **Projectile Material** Aluminum Canister containing Pyrotechnic compound
- **Projectile Weight** 102g +/-1g
- **Net Explosive Quantity** 2.3g
- **Muzzle Velocity**
- **Range** 50~75m depending on Barrel Angle
- **Discharge Time** 2.5 ~ 3 minutes
- **Irritant Agent** N/A Safe Smoke
- **Net Irritant Agent** N/A
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

- **UN Number** UN0303
- **Proper Shipping Name** Ammunition, Smoke
- **Hazard Class** 1.4G (8)
- **Labels Required** Explosive, 1.4G; Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges in metal drum
- **Total Package Weight** Box: 2.27kg (12 Cartridges)  
Drum: 14.9kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040329

POC\_SPEC\_AR-4-B

## Product Specification Sheet

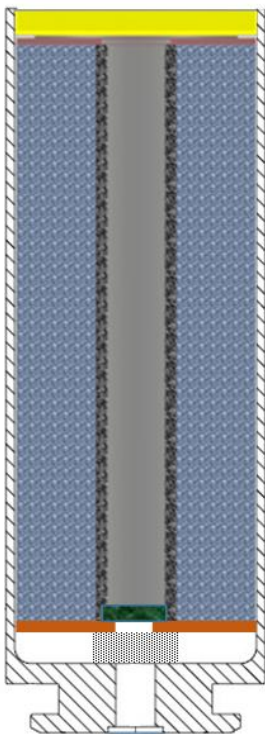
Revision G 2016-09-08

All specifications are average and are subject to change without notice.

## AR-4-B

### ARWEN® Pyrotechnic Blue Smoke, Standard Energy

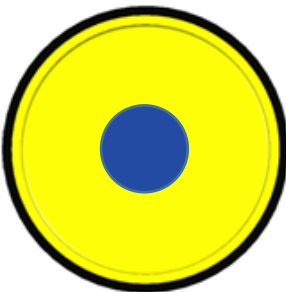
#### PHYSICAL & OPERATIONAL



➤ <b>Model No.</b>	AR-4-B
➤ <b>Description</b>	ARWEN® Pyrotechnic Blue Smoke, Standard Energy
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	173g +-2g
➤ <b>Projectile Material</b>	Aluminum Canister containing Pyrotechnic compound
➤ <b>Projectile Weight</b>	102g +-1g
➤ <b>Net Explosive Quantity</b>	2.3g
➤ <b>Muzzle Velocity</b>	
➤ <b>Range</b>	50~75m depending on Barrel Angle
➤ <b>Discharge Time</b>	2.5 ~ 3 minutes
➤ <b>Irritant Agent</b>	N/A Safe Smoke
➤ <b>Net Irritant Agent</b>	N/A
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0303
➤ <b>Proper Shipping Name</b>	Ammunition, Smoke
➤ <b>Hazard Class</b>	1.4G (8)
➤ <b>Labels Required</b>	Explosive, 1.4G; Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges
➤ <b>Total Package Weight</b>	Box: 2.27kg (12 Cartridges) Drum: 14.9kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040329



POC\_SPEC\_AR-5-OC

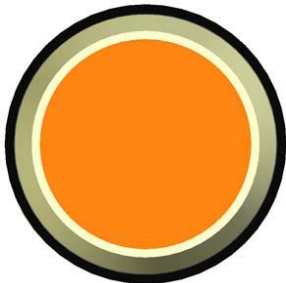
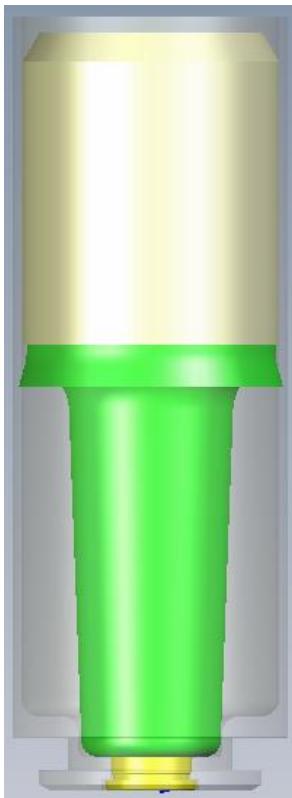
## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

## AR-5-OC

## ARWEN® Barricade Penetrating, Standard Energy OC Irritant, Powder



## PHYSICAL &amp; OPERATIONAL

- **Model No.** AR-5-OC
- **Description** ARWEN® Barricade Penetrating, Standard Energy OC Irritant, Powder
- **Caliber** 37mm ARWEN®
- **Cartridge Type** Rebated Cartridge Case
- **Cartridge Material** Aluminum, Black Anodized
- **Outside Diameter** 40mm
- **Overall Height** 110mm
- **Overall Weight** 123g ±2g
- **Projectile Material** Composite Plastic with Orange Frangible Disk
- **Projectile Weight** 56g ±1g
- **Net Explosive Quantity** 1.3g
- **Muzzle Velocity** 139m/s (456 fps)
- **Range** 80m
- **Discharge Time** Instantaneous, Upon Impact
- **Irritant Agent** OC Blend – 10% OC (oleoresin capsicum)
- **Net Irritant Agent** 6 ±1g
- **Compatibility** All 37mm ARWEN® Compatible Weapon Systems

## SHIPPING INFORMATION

- **UN Number** UN0301
- **Proper Shipping Name** Ammunition, Tear Producing
- **Hazard Class** 1.4G (6.1) (8)
- **Labels Required** Explosive, 1.4G; Toxic, Corrosive
- **Quantity Per Package** Box: 12 Cartridges (2-4 boxes in master box)  
Drum: 75 Cartridges
- **Total Package Weight** Box: 1.93kg (12 Cartridges)  
Drum: 11.6kg (75 cartridges)
- **Package Type** Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
- **Package Dimensions** Box: 16x24x19.5 cm (12 Cartridges)  
Drum 35cm x 31cm (5 gal.)
- **US DoT Ref. No.** EX2016040328



POC\_SPEC\_AR-5-P

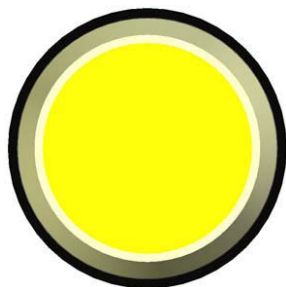
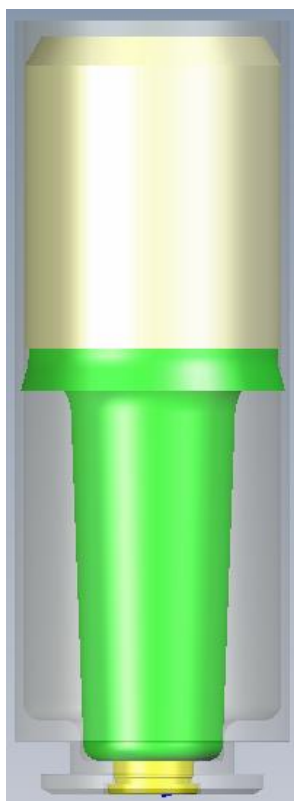
## Product Specification Sheet

Revision G 2016-08-23

All specifications are average and are subject to change without notice.

### AR-5-P

### ARWEN® Barricade Penetrating, Standard Energy Inert, Powder



#### PHYSICAL & OPERATIONAL

➤ <b>Model No.</b>	AR-5-P
➤ <b>Description</b>	ARWEN® Barricade Penetrating, Standard Energy Inert Powder - Practice
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	123g ±2g
➤ <b>Projectile Material</b>	Composite Plastic with Yellow Frangible Disc
➤ <b>Projectile Weight</b>	56g ±1g
➤ <b>Net Explosive Quantity</b>	1.3g
➤ <b>Muzzle Velocity</b>	139m/s (456 fps)
➤ <b>Range</b>	80m
➤ <b>Discharge Time</b>	Instantaneous, Upon Impact
➤ <b>Irritant Agent</b>	N/A - Inert Powder, 6 ±1g
➤ <b>Net Irritant Agent</b>	N/A
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0012
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Inert Projectile
➤ <b>Hazard Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges
➤ <b>Total Package Weight</b>	Box: 1.93kg (12 Cartridges) Drum: 11.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040326

POC\_SPEC\_AR-5-CS

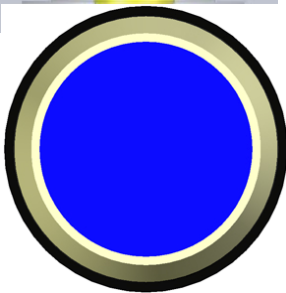
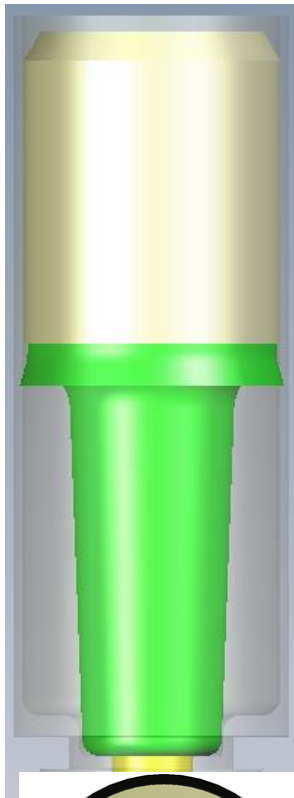
## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

## AR-5-CS

## ARWEN® Barricade Penetrating, Standard Energy CS Irritant, Powder



## PHYSICAL &amp; OPERATIONAL

➤ <b>Model No.</b>	AR-5-CS
➤ <b>Description</b>	ARWEN® Barricade Penetrating, Standard Energy CS Irritant, Powder
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	123g ±2g
➤ <b>Projectile Material</b>	Composite Plastic with Blue Frangible Disc
➤ <b>Projectile Weight</b>	56g ±1g
➤ <b>Net Explosive Quantity</b>	1.3g
➤ <b>Muzzle Velocity</b>	139m/s (456 fps)
➤ <b>Range</b>	80m
➤ <b>Discharge Time</b>	Instantaneous, Upon Impact
➤ <b>Irritant Agent</b>	CS Dust (2-chlorobenzalmalononitrile) $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
➤ <b>Net Irritant Agent</b>	6g ±1g
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems

## SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G; Toxic, Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges
➤ <b>Total Package Weight</b>	Box: 1.93kg (12 Cartridges) Drum: 11.6kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

POC\_SPEC\_AR-6-OC

## Product Specification Sheet

Revision G 2016-08-26

All specifications are average and are subject to change without notice.

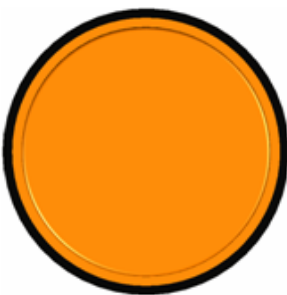
## AR-6-OC

### ARWEN® Muzzle Blast – OC Irritant Powder

#### PHYSICAL & OPERATIONAL



➤ <b>Model No.</b>	AR-6-OC
➤ <b>Description</b>	ARWEN® Muzzle Blast – OC Irritant Powder
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	110g ± 21g
➤ <b>Projectile Weight</b>	50g ± 2g Powder
➤ <b>Projectile Color</b>	White Powder
➤ <b>Net Explosive Quantity</b>	1.4g
➤ <b>Muzzle Velocity</b>	N/A
➤ <b>Kinetic Energy at Muzzle</b>	N/A
➤ <b>Range</b>	0~15m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Irritant Agent</b>	OC Blend – 10% OC (oleoresin capsicum)
➤ <b>Net Irritant Agent</b>	30 g
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge



#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G; Toxic, Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.15kg (12 Cartridges) Drum: 11.5kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

## AR-6-CS

### ARWEN® Muzzle Blast – CS Irritant Powder

#### PHYSICAL & OPERATIONAL

➤ <b>Model No.</b>	AR-6-CS
➤ <b>Description</b>	ARWEN® Muzzle Blast – CS Irritant Powder
➤ <b>Caliber</b>	37mm ARWEN®
➤ <b>Cartridge Type</b>	Rebated Cartridge Case
➤ <b>Cartridge Material</b>	Aluminum, Black Anodized
➤ <b>Outside Diameter</b>	40mm
➤ <b>Overall Height</b>	110mm
➤ <b>Overall Weight</b>	110g ± 21g
➤ <b>Projectile Weight</b>	50g ± 2g Powder
➤ <b>Projectile Color</b>	White Powder
➤ <b>Net Explosive Quantity</b>	1.4g
➤ <b>Muzzle Velocity</b>	N/A
➤ <b>Kinetic Energy at Muzzle</b>	N/A
➤ <b>Range</b>	0~15m
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Irritant Agent</b>	<b>CS Dust</b> (2-chlorobenzalmalononitrile) $\text{ClC}_6\text{H}_4\text{CHO} + \text{H}_2\text{C}(\text{CN})_2 \rightarrow \text{ClC}_6\text{H}_4\text{CHC}(\text{CN})_2 + \text{H}_2\text{O}$
➤ <b>Net Irritant Agent</b>	30 g
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

#### SHIPPING INFORMATION

➤ <b>UN Number</b>	UN0301
➤ <b>Proper Shipping Name</b>	Ammunition, Tear Producing
➤ <b>Hazard Class</b>	1.4G (6.1) (8)
➤ <b>Labels Required</b>	Explosive, 1.4G; Toxic, Corrosive
➤ <b>Quantity Per Package</b>	Box: 12 Cartridges (2-4 boxes in master box) Drum: 75 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 2.15kg (12 Cartridges) Drum: 11.5kg (75 cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x24x19.5 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040328

POC\_SPEC\_AR-PC-SE

## Product Specification Sheet

Revision G 2016-09-15

All specifications are average and are subject to change without notice.

**AR-PC-SE****.44 ARWEN® Propellant Charge, Standard Energy****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-PC-SE
➤ <b>Description</b>	.44 ARWEN® Propellant Charge, Standard Energy
➤ <b>Caliber</b>	.44 ARWEN®
➤ <b>Cartridge Type</b>	.44 ARWEN® Cartridge
➤ <b>Cartridge Material</b>	Brass
➤ <b>Outside Diameter</b>	11.18mm
➤ <b>Overall Height</b>	16.76mm
➤ <b>Weight</b>	6g ± 1g
➤ <b>Color Code</b>	Bright Green painted Wad
➤ <b>Net Explosive Quantity</b>	0.61g
➤ <b>Muzzle Velocity</b>	74m/s (242fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	219J (158ft-lbf) for AR-1 Training Impact Baton
➤ <b>Range</b>	100m for AR-1 Training Impact Baton
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0014
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Blank
➤ <b>Hazard Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	50 Cartridges per Box 1,500 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 0.34kg (50 Cartridges) Drum: 12.7kg (1,500 Cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x9x3 cm (50 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040327

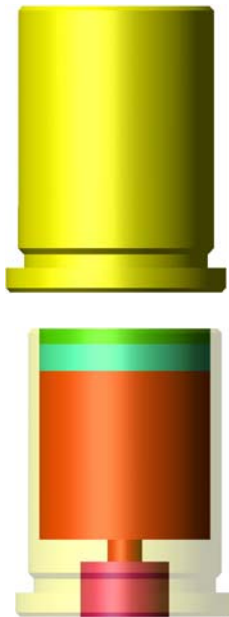


POC\_SPEC\_AR-PC-RE

## Product Specification Sheet

Revision G 2016-09-15

All specifications are average and are subject to change without notice.

**AR-PC-RE****.44 ARWEN® Propellant Charge, Reduced Energy****PHYSICAL & OPERATIONAL**

➤ <b>Model No.</b>	AR-PC-RE
➤ <b>Description</b>	.44 ARWEN® Propellant Charge, Reduced Energy
➤ <b>Caliber</b>	.44 ARWEN®
➤ <b>Cartridge Type</b>	.44 ARWEN® Cartridge
➤ <b>Cartridge Material</b>	Brass
➤ <b>Outside Diameter</b>	11.18mm
➤ <b>Overall Height</b>	16.76mm
➤ <b>Weight</b>	6g ± 1g
➤ <b>Color Code</b>	Black painted Wad
➤ <b>Net Explosive Quantity</b>	0.41g
➤ <b>Muzzle Velocity</b>	50m/s (164fps) Average – ARWEN 37 Barrel
➤ <b>Kinetic Energy at Muzzle</b>	100J (74ft-lbf) for AR-1 Training Impact Baton
➤ <b>Range</b>	50m for AR-1 Training Impact Baton
➤ <b>Compatibility</b>	All 37mm ARWEN® Compatible Weapon Systems
➤ <b>Waterproof</b>	Lacquer coated primer, and sealed propellant cartridge

**SHIPPING INFORMATION**

➤ <b>UN Number</b>	UN0014
➤ <b>Proper Shipping Name</b>	Cartridges for Weapons, Blank
➤ <b>Hazard Class</b>	1.4S
➤ <b>Labels Required</b>	Explosive, 1.4S
➤ <b>Quantity Per Package</b>	50 Cartridges per Box 1,500 Cartridges in metal drum
➤ <b>Total Package Weight</b>	Box: 0.34kg (50 Cartridges) Drum: 12.7kg (1,500 Cartridges)
➤ <b>Package Type</b>	Fiberboard Boxes or Metal Drum with Lever Lock Lid meeting UN Specifications
➤ <b>Package Dimensions</b>	Box: 16x9x3 cm (12 Cartridges) Drum 35cm x 31cm (5 gal.)
➤ <b>US DoT Ref. No.</b>	EX2016040327



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