



SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Standard JIS Z 7250:2000, and EU REACH Regulations

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **PERCUSSION CAPS**
CAS Number: Mixture – Metal Alloy and Initiating Explosive
Synonyms: Primer Caps, Musket Caps
Product Use: Muzzleloading Firearms
U.N. Number: UN0378
U.N. Dangerous Goods Class: 1.4B
Manufacturer/Responsible Party: Olin Winchester, LLC
Manufacturers' Address: 600 Powder Mill Road, East Alton, IL 62024 www.winchester.com
Emergency Telephone Number: US/Canada: 1-800-424-9300
Outside US/Canada: 703-527-3887
SDS Control Group: 618-258-3507 (Technical Information Only)

Olin SDS No.: 00104.0001

Issue Date: 02/13/17

Revision Date: 02/28/2019

Revision No.: 3

2. HAZARDS IDENTIFICATION

DANGER!

EXPLOSIVE. KEEP AWAY FROM HEAT AND SPARKS. DO NOT SUBJECT TO MECHANICAL SHOCK. PARTICLES FROM FIRING MAY BE HARMFUL IF INHALED. HARMFUL IF SWALLOWED. REPEATED EXPOSURE MAY CAUSE ADVERSE EFFECTS TO FERTILITY AND THE FETUS. POSSIBLE LONG LASTING ENVIRONMENTAL EFFECTS. DO NOT TAKE INTERNALLY.

US DOT SYMBOLS



CANADA (WHMIS) SYMBOLS

This Product is not subject to WHMIS

Explosive, Class C.3, PE3

GHS HAZARD SYMBOLS

**GHS Classifications:**

Explosive, Division 1.4
Acute Toxicity Category 3 (Oral)
Acute Toxicity Category 4 (inhalation: dust, mist)
Carcinogenicity Category 1A
Reproductive Toxicity Category 1A
STOT RE Category 2

Signal Word:

Danger

Hazard Statements :

H204: Fire or projection hazard
H301: Toxic if swallowed
H332: Toxic if inhaled
H360: May damage fertility or the unborn child
H373: May cause damage to organs through prolonged or repeated exposure

Target organs:

None Identified

<u>Precautionary Statements:</u>	P202: Do not handle until all safety precautions have been read and understood
	P210: Keep away from heat, open flames; no smoking
	P250: Do not subject to friction, grinding, or shock
	P260: Do not breathe dust, fume
	P264: Wash hands, forearms and exposed areas thoroughly after handling
	P270: Do not eat, drink or smoke when using this product
	P271: Use only outdoors or in a well-ventilated area
	P273: Avoid release to the environment
	P280: Wear protective clothing, gloves and eye protection
	P284: [in case of inadequate ventilation] wear respiratory protection
	P301+310: If swallowed, immediately call a poison control center or doctor
	P391: Collect spillage
	P501: Dispose of product properly

<u>GHS Pictograms:</u>	Exploding bomb, GHS01
	Acute toxicity, GHS06
	Specific Target Organ Toxicity, GHS08

<u>EU Classifications:</u>	
Hazard Symbols	E, T
Risk Phrases	R2: Risk of explosion by shock, friction, fire or other sources of ignition R20/22: Harmful by inhalation or if swallowed R45 (Category 1): May cause cancer R48: Danger of serious damage to health by prolonged exposure R60/63: May impair fertility and possible risk of harm to the unborn child

Safety Phrases	S15/16: Keep away from heat, sources of ignition S20/21: When using do not eat, drink or smoke S23: Do not breathe dust or fumes S28: After contact with skin wash immediately with plenty of water S36/37/39: Wear suitable protective clothing, gloves and eye protection S38: In case of insufficient ventilation, wear suitable respiratory protection S51: Use only in well-ventilated areas S53: Avoid exposure – obtain special instructions before use S61: Avoid release to the environment S62: If swallowed, do not induce vomiting: seek medical advice immediately
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Health Hazards or Risks From Exposure

This product is the finished metal alloy primer cap used in muzzleloading firearms. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. The product contains trace amounts of these harmful substances:

Copper: Inhalation of high concentrations of metallic copper dusts or fumes may cause nasal irritation and/or nausea, vomiting and stomach pain.

Barium: Ingestion of large doses of soluble barium compounds can cause cyanosis, skeletal muscle paralysis, respiratory arrest, irregular heartbeat and hypertension.

Lead: Ingestion of large amounts of lead can cause abdominal pain, constipation, cramps, nausea and/or vomiting. Chronic exposure to lead can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage in humans including changes in cognitive function. Occupational exposure to lead is associated with lung and stomach cancer. Lead is classified as a probable human carcinogen.

It is unlikely that someone would be exposed to a significant amount of copper, barium or lead from handling these metal pieces.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% By Weight	CAS Number	EINECS/ ELINCS #
Copper	60 – 70	7440-50-8	231-159-6
Zinc	2 - 30	7440-66-6	231-175-3
Barium	0 – 2	7440-39-3	231-149-1
1,3-Benzenediol, 2,4,6-trinitro-, lead salt	0 - 2	15245-44-0	239-290-0

4. FIRST AID MEASURES

<u>Eye Contact:</u>	Immediately flush out trace material with water, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops, call a physician at once.
<u>Skin Contact:</u>	Remove any contaminated clothing. Wash skin with plenty of soap and water.
<u>Inhalation:</u>	Remove exposed individual from site of exposure; keep at rest in fresh air in a position comfortable for breathing. If exposed individual continues to feel unwell, call a physician or a poison control center
<u>Ingestion:</u>	If ingested, rinse mouth. Do not induce vomiting. Immediately call a physician.

Medical Conditions Aggravated By Exposure:

There are no medical conditions known to be aggravated by exposure to this product in its solid form.

Recommendations To Physicians:

No specific antidote available, treat symptoms

5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
Explosive	Yes	Flammable	Not applicable
Combustible	Not applicable	Pyrophoric	No
Flash Point (°C):	Not applicable	Burning Rate of Material:	Not applicable
Lower Explosive Limit:	Not applicable	Autoignition Temp.:	250 °F
Upper Explosive Limit:	Not applicable	Flammability Classification: (defined by 29 CFR 1910.1200)	Not applicable

Unusual Fire and Explosion Hazards:

Explosion risk in case of fire. May detonate with heat, friction or mechanical impact. May ignite if heated to 250 °F. Not sensitive to static discharge.

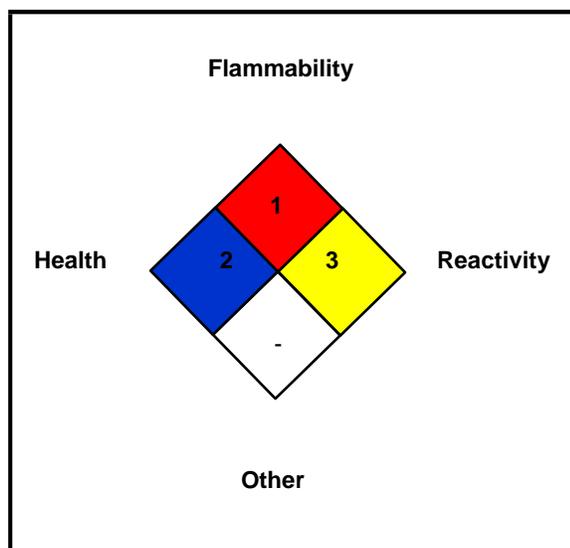
Extinguishing Media:

Choose extinguishing media suitable for surrounding materials.

Special Firefighting Procedures:

Exercise caution when fighting any chemical fire. Do not fight fire when fire reaches explosives. Evacuate to a safe distance. Firefighters should wear full protective gear. Do not breathe fumes or vapors from decomposition.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HEALTH HAZARD (BLUE)		2*	
FLAMMABILITY HAZARD (RED)		1	
PHYSICAL HAZARD (YELLOW)		3	
PROTECTIVE EQUIPMENT			
EYES	PPE CODE	RESPIRATORY	HEARING
	A	See Sect 8	See Section 8

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

6. ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.

Spill Response: A spill of this material will normally not require emergency response team capabilities. If, however, a large spill occurs, call 1-888-289-1911 for technical assistance.

Accidental Release Procedures: Spills of this material should be handled carefully. Remove ignition sources. Do not subject materials to heat or mechanical shock. Collect material and place in a designated, labeled waste container. See Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Use appropriate personal protective equipment (see Section 8). Workers should wash hands thoroughly after handling. Eating, drinking and smoking should be prohibited in areas where this material is handled and stored.

Conditions for Safe Storage: Store in accordance with local regulations. Store in original containers in a cool, dry location away from Acids, Class A & B explosives, strong oxidizers and caustics. Avoid mechanical impact or shock.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7440-50-8	Copper	0.2 mg/m ³ (fume), 1 mg/m ³ (dusts and mists)	0.1 mg/m ³ (fume) 1 mg/m ³ (dusts and mists)	Austria, Belgium, Canada: 0.2 mg/m ³ (fumes), 1 mg/m ³ (dusts) Denmark: 1.0 mg/m ³ (dust and powder) Germany (MAK): 0.1 mg/m ³ (fume), 1 mg/m ³ (dusts and mists)
7440-66-6	Zinc	None established	None established	None established
7440-39-3	Barium	0.5 mg/m ³ (inhalable)	0.5 mg/m ³	Australia, Canada, EU, Ireland, New Zealand, Poland, Singapore, South Korea, U.K. = 0.5 mg/m ³ Germany: 0.5 mg/m ³ (inhalable aerosol) [except barium oxide and barium dihydroxide] Short term limit value: 4 mg/m ³ (inhalable aerosol) Sweden: 0.5 mg/m ³ (total dust)
15245-44-0	1,3-Benzenediol, 2,4,6-trinitro-, lead salt	None established	None established	None established

Engineering Controls: Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation. Use explosion-proof ventilation.

Respiratory Protection: Not normally needed. Maintain airborne contaminant concentrations below guidelines listed above. Use an appropriate approved air-purifying respirator equipped with HEPA cartridges/canisters where there is the potential for exceeding established occupational exposure limits.

Eye/Face Protection: Use safety glasses

Hand Protection: Not normally needed

Skin Protection: Not normally needed

Hearing Protection: Not normally needed. During firing use hearing protection.

General Hygiene: Do not eat, drink or smoke while using this product. Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
Appearance:	Small metal alloy pieces	Physical State:	Solid
Odor:	None	Odor Threshold:	None
Boiling Point (°F):	Not applicable	Melting point:	Not applicable
Vapor Pressure (mm Hg):	Not applicable	Freezing point:	Not applicable
Vapor Density (air = 1):	Not applicable	Bulk Density (g/cc):	Not available
Specific gravity (g/cc):	Not available	Viscosity (cps):	Not applicable
pH:	Not applicable	Decomposition Temperature:	Not applicable
Solubility in Water (20 °C):	Insoluble	Evaporation Rate:	Not applicable
Volatiles, Percent by volume:	Not applicable	Octanol/water partition coefficient:	Not applicable

10. STABILITY AND REACTIVITY

Stability:

Possibility of Hazardous Reactions:

Incompatible Materials:

Hazardous Decomposition Products:

Conditions to Avoid:

Risk of explosion by shock, friction, fire or other sources of ignition

Hazardous polymerization will not occur

Strong acids, strong bases, strong oxidizers

None known. Reaction with acids may liberate explosive hydrogen gas.

Heat, sparks, open flame, direct sunlight, contact with incompatible materials.

11. TOXICOLOGICAL INFORMATION

Potential Routes of Entry: Inhalation, Skin, and by Ingestion.

The physical nature of this product makes absorption from any route unlikely.

Effects Of Acute Exposure:

PRODUCT		COMPONENTS			
		Barium	Lead Styphnate*	Copper	Zinc
Inhalation LC ₅₀	Inhalation unlikely	No data	1,500 mg/m ³ (estimated)	No data	No data
Skin Contact LD ₅₀	Skin absorption unlikely	No data	No data	375 mg/kg, sc (rabbit)	No data
Ingestion LD ₅₀	Ingestion unlikely, possibly toxic	100 – 500 mg/kg (rat)	500 mg/kg (estimated)	3.5 mg/kg, ip (mouse)	No data
Irritation	Not a skin or eye irritant as a solid.	Eye and skin irritant	No data	Respiratory irritant	Eye irritant
Sensitization	Sensitization to this Product has not been reported	No data	No data	No data	No data

*Lead styphnate is a synonym for 1,3-benzenediol, 2,4,6-trinitro, lead salt

Other Adverse Effects:

Target Organ Toxicity:

No reported target organ toxicity from this product. Repeated exposure to lead has caused nervous system, kidney and hematopoietic system damage in humans and laboratory animals.

Reproductive Toxicity:

This product is not known or reported to cause reproductive effects. Repeated exposure to lead has been shown to reduce male reproductive function in humans and laboratory animals.

Teratogenicity (Birth Defects):

This product is not known or reported to cause developmental toxicity. Lead has been shown to affect fetal development; changes including birth defects have been reported.

Mutagenicity:

This product is not known or reported to be mutagenic. Lead has been shown to be mutagenic in several *in vitro* assays.

Carcinogenicity:

IARC and US EPA list lead and lead compounds as probable human carcinogens (Group 2A) based on sufficient evidence from animal studies and limited evidence from human studies (epidemiology). NTP classifies lead and lead compounds as reasonably anticipated to be human carcinogens.

12. ECOLOGICAL INFORMATIONEnvironmental Effects:

PRODUCT: Product has not been tested for environmental properties.

COMPONENTS:

Copper:

Copper concentrations from 0.1 to 1.0 mg/l have been found to be not toxic for most fish. However, concentrations of 0.015 to 3.0 mg/l have been reported as toxic, particularly in soft water to many kinds of fish, crustacea, mollusks, insects, and plankton.

Zinc:

The following concentrations of zinc have been reported as lethal to fish: 0.13 mg/l, for 12 – 24 hours to Rainbow trout fingerlings; 1.9 – 3.6 mg/l, 6 hr TLM (soft water, 30°C) to Bluegill Sunfish; 4 mg/l, 3 days (hard water) to Rainbow trout; 1 mg/l, 24 hours (soft water) to Sticklebacks.

The presence of copper appears to have a synergistic effect on the toxicity of zinc towards fish.

Environmental Fate:

MOBILITY: No data
 PERSISTANCE/DEGRADABILITY: Not biodegradable.
 BIOACCUMULATION: No data

13. DISPOSAL CONSIDERATIONS

Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding the treatment, storage and disposal for hazardous and nonhazardous wastes.

14. TRANSPORT INFORMATIONRegulatory Information for US DOT, IATA, IMO, and ADR:

Proper Shipping Name: Primers, Cap Type

Hazard Class Number and Description: 1.4B

UN Identification Number: UN0378

Packing Group: II

DOT Label(s) Required: Yes

Additional Information: ERG Number 114

15. REGULATORY INFORMATIONUS FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.			
CERCLA:	Copper, R.Q.* = 5000 lbs.; Zinc, R.Q. = 1000 lbs. (No reporting is required if diameter of the pieces of metal is equal to or exceeds 100 micrometers (0.004 inches).			
SARA 313:	Barium, Copper, Lead and lead compounds, Zinc (fume or dust)			
SARA 311/312:	<u>Health:</u>	Acute – Yes Chronic - Yes	<u>Fire:</u> No	<u>Reactivity:</u> Yes <u>Release of Pressure:</u> No
SARA 302 EHS List:	None of the components of this product are listed.			

*RQ = Reportable Quantity

STATE RIGHT-TO-KNOW STATUS

Component	California	New Jersey	Pennsylvania	Massachusetts	Michigan
Copper	Not listed	X	X	X	X
Zinc	Not listed	X	X	X	X
Barium	Not listed	X	X	X	X
1,3-Benzenediol, 2,4,6-trinitro-, lead salt	Yes*	X	Not listed	X	Not listed

*California Prop. 65; Listed under lead and lead compounds

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65)

Warning! This product contains detectable amounts of a chemical known to the State of California to cause cancer and/or birth defects or other reproductive harm.

GHS CLASSIFICATION

Explosive, Division 1.4
 Acute Toxicity Category 3 (Oral)
 Acute Toxicity Category 4 (inhalation: dust, mist)
 Carcinogenicity Category 1A
 Reproductive Toxicity Category 1A
 STOT RE Category 2

EUROPEAN REGULATIONS

All chemical components listed on EINECS

Hazard Classification

Danger Symbols: E, T

Risk Phrases: R2, R20/22, R48, R60/63

Safety Phrases: S15/16, S20/21, S23, S28, S36/37/39, S38, S51, S53, S61, S62

German WGK Classification: Not known.

CANADIAN REGULATIONS

DSL/NDSL Inventory: The components of this product are on the DSL

IDL: Copper

CEPA PRIORITIES LIST: None

WHMIS: Not subject to WHMIS

JAPANESE REGULATIONS

Existing National Inventory of Chemical Substances (ENCS): The components of this product are listed

Japanese Priority Assessment Chemical Substances: None of the components of this product are listed

OTHER INTERNATIONAL CHEMICAL INVENTORIES

Swiss Giftliste List of Toxic Substances: All Components Listed
 Australian Inventory (AICS): All Components Listed

16. OTHER INFORMATION

REVISIONS: 3

DATE: 02/28/2019

PREPARED BY: Olin Winchester, LLC

OTHER: Additional information available from: www.winchester.com

NOTICE: THE INFORMATION IN THIS SDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. OLIN BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.