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: **CASES – PRIMED CENTERFIRE LEAD-FREE**

CAS Number: Mixture – Metal Alloy

Synonyms: Centerfire Heavy Metal Free Primer Shellcase

CENTERFIRE LEAD FREE PRIMED SHELLCASES USE THE FOLLOWING DESCRIPTIONS IN VARIOUS COMBINATIONS PRECEDED BY THE CALIBER OF THE PRIMED CASE. THE TERM "LEAD FREE" OR THE ABBREVIATION "LF" WILL ALSO BE PART OF THESE TERMS:

CENTERFIRE PRIMED BRASS	CENTERFIRE PRIMED SHELLCASE
CENTERFIRE RIFLE PRIMED CASE	CENTERFIRE PISTOL PRIMED CASE
CENTERFIRE RIFLE PRIMED SHELLCASE	CENTERFIRE PISTOL PRIMED SHELLCASE
CENTERFIRE RIFLE PRIMED BRASS	CENTERFIRE PISTOL PRIMED BRASS
CFR PRIMED CASE	CFP PRIMED CASE
CFR PRIMED SHELLCASE	CFP PRIMED SHELLCASE
CFR PRIMED BRASS	CFP PRIMED BRASS
PSC (PRIMED SHELLCASE)	EPC (EMPTY PRIMED CASE)
LF (LEAD FREE)	

Product Use: Small arms primed shellcase

U.N. Number: UN 0055

U.N. Dangerous Goods Class Explosive, 1.4S

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.: 00074.0001 **Issue Date:** 6/1/15

Revision Date: 01/01/2026

Revision No.: 11

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: EXPLOSIVE. KEEP AWAY FROM HEAT. DO NOT SUBJECT TO MECHANICAL SHOCK. PARTICLES FROM FIRING MAY BE HARMFUL IF INHALED. DO NOT TAKE INTERNALLY.

US DOT SYMBOLS	CANADA (WHMIS) SYMBOLS	GHS HAZARD SYMBOLS
	This Product is not subject to WHMIS Class 6 Explosive	

GHS Classifications:	Explosive Division 1.4
Signal Word:	Danger
Hazard Statements :	H204: Fire or projection hazard
Target organs:	None
Precautionary Statements:	P102: Keep out of reach of children P210: Keep away from heat/sparks/open flame/hot surfaces P250: Do not subject to shock/friction
GHS Pictograms:	Explosive; Pictogram: exploding bomb

EU Classifications:

Hazard Symbols	E
Risk Phrases	R2: Risk of explosion by shock, friction, fire or other sources of ignition
Safety Phrases	S2: Keep out of reach of children S15: Keep away from heat

Health Hazards or Risks From Exposure

This product is composed of a finished plastic tube which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When ammunition using this primer is fired, a small amount of particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain 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.
Potassium nitrate: Ingestion of large doses of potassium nitrate can lead to the development of methemoglobinemia (inability of the blood to carry sufficient oxygen). It is not anticipated that exposure from this product would cause this effect.

It is unlikely that the amount of particles that someone would be exposed to from firing a loaded round would be sufficient to cause any of these effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	% By Weight	CAS Number	EINECS/ ELINCS #
Copper	55 – 92	7440-50-8	231-159-6
Zinc	8 - 45	7440-66-6	231-175-3
Potassium nitrate	3 – 5	7757-79-1	231-818-8
Diazodinitro phenol	2 - 5	4682-03-5	225-134-9
Nitrocellulose	1.5 – 2.5	9004-70-0	Polymer
Boron	0.5 – 1.5	7440-42-8	231-151-2

4. FIRST AID MEASURES

Eye Contact: Immediately flush out fume or particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.

Skin Contact: Wash skin with plenty of soap and water.

Inhalation: If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.

Ingestion: If ingested, 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 Physcians:
Remove from exposure, if possible, and 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.:	No data
Upper Explosive Limit:	Not applicable	Flammability Classification: (defined by 29 CFR 1910.1200)	Explosive

Unusal Fire and Explosion Hazards: Possible projection hazard.

Extinguishing Media: Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used.

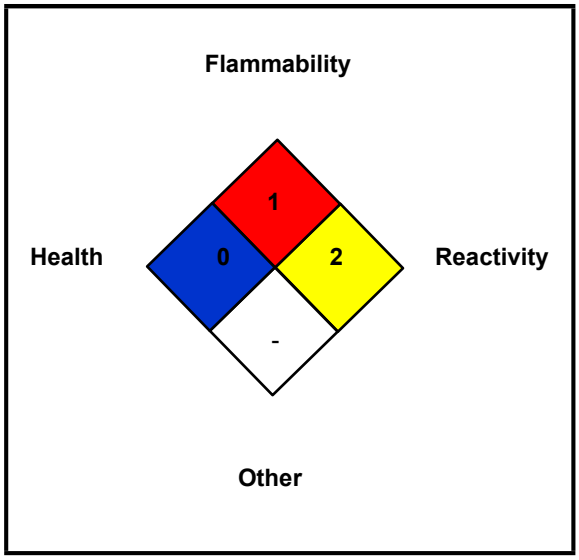
Special Firefighting Procedures: Do not fight fire when fire reaches cargo. Cargo may explode.

Firefighters must wear self-contained breathing apparatus (SCBA) and full protective equipment. Structural firefighters' protective clothing will provide protection.

Isolate materials not yet involved in the fire. Move containers from fire area if possible; otherwise, cool with carefully applied water spray.

Prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas, if practical.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HEALTH HAZARD (BLUE)	**0**
FLAMMABILITY HAZARD (RED)	**1**
PHYSICAL HAZARD (YELLOW)	**2**

PROTECTIVE EQUIPMENT			
EYES	PPE CODE	RESPIRATORY	HEARING
	A	See Sect 8	See Sect 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. Do not subject materials to 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 and electrical discharge.

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
7757-79-1	Potassium nitrate	None established	None established	None established
4682-03-5	Diazodinitro phenol	None established	None established	None established
9004-70-0	Nitrocellulose	None established	None established	None established
7440-42-8	Boron	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:	Red/gold metallic color (non-plated); silver colored (nickel plated)	*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*	Not applicable
Specific gravity (g/cc):	Not applicable	*Viscosity (cps):*	Not applicable
pH:	Not applicable	*Decomposition Temperature:*	60°C (140°F)
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: Stable under normal temperatures and pressure.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur

Incompatible Materials: Acids, Class A & B explosives, strong oxidizers, and caustics

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide

Conditions to Avoid: Contact with incompatible materials. Physical damage to containers; cartridges may detonate if case is punctured. Temperatures at or above 60°C

11. TOXICOLOGICAL INFORMATION

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

The physical nature of this product makes absorption from any route unlikely. A small amount of inhalable particles may be created when cartridge is fired.

Effects Of Acute Exposure:

PRODUCT		COMPONENTS					
		Diazodinitro phenol	Copper	Potassium nitrate	Zinc	Nitro-cellulose	Boron
Inhalation LC_{50}	Particles generated from firing may be slightly toxic	No data	No data	No data	No data	No data	No data
Skin Contact LD_{50}	Skin absorption unlikely	No data	375 mg/kg, sc (rabbit)	No data	No data	No data	No data
Ingestion LD_{50}	Ingestion unlikely	No data	3.5 mg/kg, ip (mouse)	3750 mg/kg (rat)	No data	> 5 g/kg (rat)	No data
Irritation	Particles generated from firing may be slightly irritating to the eyes	Respiratory irritant	Respiratory irritant	Respiratory irritant	Eye irritant	No data	No data
Sensitization	Sensitization to this Product has not been reported	No data	No data	No data	No data	No data	No data

Other Adverse Effects:

Target Organ Toxicity: No reported target organ toxicity from this product.
Reproductive Toxicity: This product is not known or reported to cause reproductive effects.
Teratogenicity (Birth Defects): This product is not known or reported to cause developmental toxicity.
Mutagenicity: This product is not known or reported to be mutagenic. Diazodinitrophenol tested positive in a bacterial mutagenicity test.
Carcinogenicity: This product is not listed as a carcinogen by OSHA, NTP or IARC.

12. ECOLOGICAL INFORMATION

Environmental 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.

Nitrocellulose: LC_{50} > 1000 mg/l to fish, invertebrates, and algae.

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 INFORMATION

Regulatory Information for US DOT, IATA, IMO, and ADR:

Proper Shipping Name: Cases, Cartridge, Empty With Primer

Hazard Class Number and Description: Explosive 1.4S

UN Identification Number: UN 0055

Packing Group: N/A

DOT Label(s) Required: Explosive 1.4

Marine Pollutant: None of the ingredients are classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B)

Additional Information:

North American Emergency Response Guidebook Number (2004): 114

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING REGULATIONS: This product is classified as dangerous goods under 49 CFR 172.101. Note: Product is not regulated for domestic transportation per 49 CFR 172.102 (c) (1) Special Provision 50.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA): This product is classified as Dangerous Goods.

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is classified as Dangerous Goods.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR): This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

15. REGULATORY INFORMATION

US 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:	Copper, Zinc (fume or dust)				
SARA 311/312:	*Health*:	Acute – No Chronic - No	*Fire:* No	*Reactivity:* Yes	*Release of Pressure*: 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	Not listed	X	X
Potassium nitrate	Not listed	Not listed	X	X	Not listed
Diazodinitro phenol	Not listed	Not listed	Not listed	Not listed	Not listed
Nitrocellulose	Not listed	X	X	X	Not listed
Boron	Not listed	Not listed	Not listed	Not listed	Not listed

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

No components listed

GHS CLASSIFICATION

Explosive Division 1.4

EUROPEAN REGULATIONS

All chemical components listed on EINECS except nitrocellulose (considered a polymer)

Hazard Classification

Danger Symbols: E

Risk Phrases: R2

Safety Phrases: S2, S15

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: This product is not subject to WHMIS. It is regulated as a Class 6 Explosive in Canada.

JAPANESE REGULATIONS

Existing National Inventory of Chemical Substances (ENCS): All components of this product are listed except diazodinitro phenol

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

OTHER INTERNATIONAL CHEMICAL INVENTORIES

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

16. OTHER INFORMATION

REVISIONS: 11
DATE: 01/01/2026
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.