

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: **CARTRIDGES, SHOTSHELL STEEL SHOT TARGET**
CAS Number: Mixture – Metal Alloy
Synonyms: Reduced Hazard Steel Shot Target Load
Product Use: Shotgun Loaded Ammunition
U.N. Number: UN 0012
U.N. Dangerous Goods Class: Explosive, 1.4S
Manufacturer: Olin Corporation – Winchester Division, Inc.
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.: 00095.0001

Issue Date: 6/1/15

Revision Date: 01/31/2017

Revision No.: 2

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

This Product is not subject to WHMIS

Class 6 Explosive

GHS HAZARD SYMBOLS



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 plastic tube and finished metal alloy cartridge which contains the various components completely sealed within. Therefore, under normal handling of this product, no exposure to any harmful materials will occur. When the ammunition 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:

Nitroglycerin: Will produce dilation of blood vessels and drop in blood pressure which may affect the heart. It has also been shown to cause methemoglobinemia (cyanosis).

Nickel: Repeated exposure may cause an allergic skin reaction consisting of itching, redness, swelling, and rash or urticaria (hives) in sensitized individuals. Epidemiological studies in humans have shown an association between lung and nasal cancers and prolonged occupational exposures to high concentrations of nickel.

Manganese: Chronic exposure to very high concentrations of manganese dust has caused nervous system effects including muscle weakness, tremors, and behavioral changes.

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

Chromium: Exposure to high concentrations of chromium dusts or fumes can cause severe respiratory and nasal irritation. Prolonged or repeated exposures to chromium dusts or fumes may cause perforation of the nasal septum, bloody nose and other symptoms of severe nasal irritation.

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

Consists of the following components:

- A) Load – Steel Shot
- B) Plastic Shotshell Case
- C) Wad
- D) Propellant
- E) Primer
- F) Buffer (Considered to be a manufactured article)

Components	% By Weight	CAS Number	EINECS/ ELINCS #
Iron	43 – 54	7439-89-6	231-096-4
Copper	0.1 – 4	7440-50-8	231-159-6
Manganese	0.1 – 3	7439-96-5	231-105-1
Nickel	0.1 – 3	7440-02-0	231-111-4

Chromium (non-hexavalent)	0.1 – 2	7440-47-3	231-157-5
Silicon	0.1 – 2	7440-21-3	231-130-8
Polyethylene	10 – 17	9002-88-4	Polymer
Zinc	1 – 4	7440-66-6	231-175-3
Wad (non-hazardous)	4 -11	Mixture	Not applicable
Nitrocellulose	5 - 10	9004-70-0	Polymer
Nitroglycerin	0.5 – 2	55-63-0	200-240-8

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. Exposure to dust or fume may aggravate an existing dermatitis, asthma, emphysema, or other respiratory disease.

Recommendations To Physicians:

Remove from exposure, if possible, and treat symptoms

5. FIRE FIGHTING MEASURES

<i>PROPERTY</i>	<i>VALUE</i>	<i>PROPERTY</i>	<i>VALUE</i>
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

Unusual Fire and Explosion Hazards:

Extinguishing Media:

Special Firefighting Procedures:

Possible projection hazard.

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

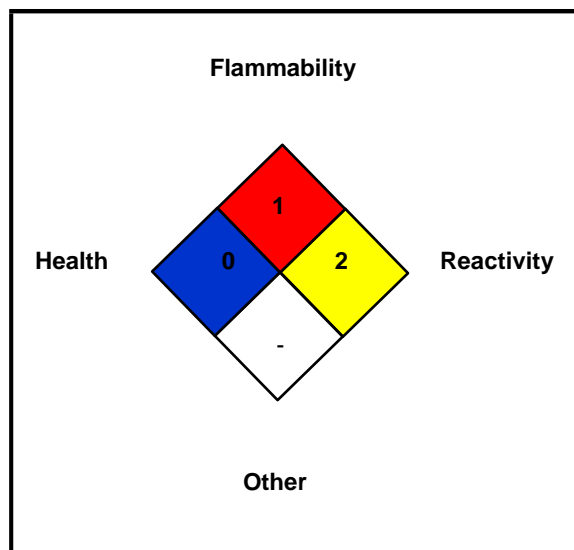
Do not fight fire when fire reaches cargo. Cargo may explode.

Firefighters must wear self-contained breathing apparatus (SCBA) and full protective equipment. Structural firefighters' protective clothing will only provide limited 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 PROTECTIONControl parameters:

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7439-89-6	Iron	None established	None established	None established
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)
7439-96-5	Manganese	0.2 mg/m ³	Ceiling – 5 mg/m ³	Belgium, Denmark, Finland, France, Switzerland, U.K. – 1 mg/m ³ Sweden – 2.5 mg/m ³ Germany (MAK) – 0.5 mg/m ³
7440-02-0	Nickel	1.5 mg/m ³ (inhalable)	1 mg/m ³	Germany, MAK = 1 mg/m ³ Canada (B.C.), Czechoslovakia, Denmark, Norway – 0.05 mg/m ³ , K1, sensitizer Poland = 0.25 mg/m ³ Ireland, Sweden, Switzerland, U.K. = 0.5 mg/m ³ Belgium, Canada (Alberta & others), Finland, Japan, Mexico, Netherlands – 1 mg/m ³ Portugal = 1.5 mg/m ³
7440-47-3	Chromium	0.5 mg/m ³	1 mg/m ³	Belgium, Denmark, France, Japan, Netherlands, Sweden, U.K. – 0.5 mg/m ³ Finland – 0.1 mg/m ³
7440-21-3	Silicon	None established	None established	Belgium, Denmark, France, Netherlands, U.K. – 10 mg/m ³ Switzerland – 4 mg/m ³
9002-88-4	Polyethylene	None established	None established	None established
7440-66-6	Zinc	None established	None established	None established
9004-70-0	Nitrocellulose	None established	None established	None established
55-63-0	Nitroglycerin	0.05 ppm (0.46 mg/m ³) Skin	Ceiling – 0.2 ppm (2 mg/m ³)	Denmark: 0.02 ppm (0.2 mg/m ³) Norway, Sweden: 0.03 ppm (0.3 mg/m ³) Austria, Belgium, Germany, The Netherlands, Poland, Switzerland: 0.05 ppm (0.47 mg/m ³), skin Finland, France: 0.1 ppm (0.9 mg/m ³), skin U.K.: 0.2 ppm (2 mg/m ³), skin

Engineering Controls:

Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust 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:	Cylindrical plastic cartridge with metal base	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

PROPERTY	VALUE	PROPERTY	VALUE
Specific gravity (g/cc):	Not applicable	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:

Stable under normal temperatures and pressure.

Hazardous polymerization will not occur

Acids, Class A & B explosives, strong oxidizers, and caustics

Nitrogen oxides, carbon monoxide, lead oxides, carbon dioxide, lead dust/fume

Contact with incompatible materials. Physical damage to containers; cartridges may detonate if case is punctured.

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		SELECTED COMPONENTS										
		Nitro-glycerin	Nickel	Manganese	Copper	Chromium	Silicon	Poly-ethylene	Nitro-cellulose	Iron	Zinc	
Inhalation LC ₅₀	Particles generated from firing may be slightly toxic	No data	>12 mg/kg, it (rat)	No data	No data	87 mg/m ³ (rat)	No data	No data	No data	No data	No data	No data
Skin Contact LD ₅₀	Skin absorption unlikely	>280 mg/kg (rabbit)	>7.5 g/kg, sc (rabbit)	No data	375 mg/kg, sc (rabbit)	No data	No data	No data	No data	No data	No data	No data
Ingestion LD ₅₀	Ingestion unlikely	105 mg/kg (rat)	>5 g/kg (rat)	9 g/kg (rat)	3.5 mg/kg, ip (mouse)	27.5 mg/kg (rat)	3.16 g/kg (rat)	>3 g/kg (rat)	> 5 g/kg (rat)	30 g/kg (rat)	No data	No data
Irritation	Particles generated from firing may be slightly irritating to the eyes	Mild eye & skin irritant	Respiratory irritant	Mild eye & skin irritant	Respiratory irritant	Nasal & respiratory irritant	Eye, skin, respiratory irritant	No data	No data	Eye irritant	Eye irritant	
Sensitization	Sensitization to this Product has not been reported	No data	Skin sensitizer	No data	No data	No data	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. Chronic exposure to very high concentrations of manganese dust has caused nervous system effects including muscle weakness, tremors, and behavioral changes in humans.

Reproductive Toxicity:

This product is not known or reported to cause reproductive effects. Exposure of male rats to high concentrations of nickel caused testicular degeneration.

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. Nickel has been shown to be mutagenic in *in vitro* studies.

Carcinogenicity:

This product is not listed as a carcinogen by OSHA, NTP or IARC. In laboratory animal studies, chronic exposure to high concentrations of nickel has caused an increase in lung and nasal tumors. IARC has classified nickel as possibly carcinogenic to humans, group 2B.

12. ECOLOGICAL INFORMATIONEnvironmental Effects:

PRODUCT: Product has not been tested for environmental properties.

COMPONENTS:

Chromium:

Daphnia magna, 48 hr. LC₅₀ = 0.022 mg/L; Fathead minnow, 96 hr LC₅₀ = 39 mg/L

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.

Nickel:

Freshwater algae (4 species), 72 hr. EC₅₀ = 0.1 mg/L; *Daphnia magna*, 96 hr LC₅₀ = 0.51 mg/L; Rainbow trout, 96 hr LC₅₀ = 31.7 mg/L; Fathead minnow, 96 hr LC₅₀ = 3.1 mg/L

Nitroglycerin:

Bluegill sunfish, 96 hour LC₅₀ = 1.228 mg/l (static)

Nitrocellulose:

LC₅₀ > 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

PERSISTENCE/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:

Cartridges, small arms (other than blanks)

Hazard Class Number and Description:

Explosive 1.4S

UN Identification Number:

UN 0012

Packing Group:

PGII

DOT Label(s) Required:

Label Not Required for ground shipment.

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: 114 Most Current Version is 2012

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING REGULATIONS: This product is classified as dangerous goods under 49 CFR 172.101. Note: May be reclassified domestically as an ORM-D or Limited Quantity if packaged in accordance with 49 CFR 173.63.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods (If packaged appropriately this product may ship as a Limited Quantity).

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

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION: This product is classified as Dangerous Goods (If packaged appropriately this product may ship as a Limited Quantity).

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. (If packaged appropriately this product may ship as a Limited Quantity).

15. REGULATORY INFORMATION

US FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.				
CERCLA:	Chromium, R.Q. = 5000 lbs.; Copper, R.Q.* = 5000 lbs.; Zinc, R.Q. = 1000 lbs.; Nickel, R.Q. = 100 lbs.; Nitroglycerin, R.Q. = 10 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), Nitroglycerin, Nickel, Chromium, Manganese				
SARA 311/312:	<u>Health:</u>	Acute – No Chronic - No	<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	Not listed	X	X
Nitrocellulose	Not listed	X	X	X	Not listed
Nitroglycerin	Not listed	X	X	X	Not listed
Nickel	X	X	X	X	X
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Chromium (not hexavalent)	Not listed	X	X	X	X
Silicon	Not listed	Not listed	X	X	Not listed
Manganese	Not listed	X	X	X	Not listed
Polyethylene	Not listed	Not listed	Not listed	Not listed	Not listed

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

EUROPEAN REGULATIONS

All chemical components listed on EINECS except polyethylene and nitrocellulose (considered polymers)

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, Manganese, Nickel, Chromium

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): The components of this product are Listed

Japanese Priority Assessment Chemical Substances: None of the components of this product s 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: 02

PREPARED BY: Olin Corporation

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.