



SAFETY DATA SHEET

HEVI-Shot SDS: HEVI-Duty® Non-Toxic, Frangible Loaded Cartridges

Revision No.: 1

Date: 6/25/2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: NON-TOXIC, FRANGIBLE LOADED CARTRIDGES
Chemical Name: Ammunition
Synonyms: HEVI-Duty® Non-Toxic, Frangible Loaded Cartridge Ammunition
Chemical Family: N/A
Formula: Not applicable – mixture
Product Use: Ammunition – Centerfire Rifle and Pistol Loaded Ammunition
Company Address: Federal Cartridge Company d/b/a Hevi Shot
 1307 Clark Mill Rd
 P.O. Box 779
 Sweet Home, OR 97386
 T 1-800-635-7656
 dangerous.goods@vistaoutdoor.com

EMERGENCY TELEPHONE:
 CHEMTREC Day or Night
 1-800-424-9300 CCN796979

2. HAZARDS IDENTIFICATION

HAZARD RATINGS

Hazardous Materials Identification

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

Explosive Division 1.4
 Signal Word: Danger



HUMAN THRESHOLD RESPONSE DATA

Hazard Statements:

H204: Fire or projection hazard
 P102: Keep out of reach of children
 P210: Keep away from heat/sparks open flame/hot surfaces
 P250: Do not subject to shock/friction

Precautionary Statements:

EU Classifications:

Hazard Symbols
 Risk Phrases
 Safety Phrases

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

POTENTIAL HEALTH EFFECTS: Under normal handling of the product, no exposure to any harmful materials will occur. When the ammunition is fired, a small number of particles may be generated which may be slightly irritating to the eyes and the respiratory tract. The particles may contain trace amounts of 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). It is unlikely the number 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

CAS Number	Components	% By Weight	EINECS/ELINCS#	EU Classification	
				Symbol	R-Phrase
7440-33-7	Tungsten	10-65	231-143-9	None	None
15245-44-0	Normal Lead Styphnate	0-1.1	239-290-0	E, T, N	R61-3-20/22-33-50/53-62
7439-89-6	Iron	0-84	231-096-4	None	None
7440-31-5	Tin	0-25	231-141-8	None	None
7440-66-6	Zinc	0-50	231-175-3	F	R15-17
7440-50-8	Copper	0-100	231-159-6	None	None
9002-88-4	Polyethylene	10-25	Polymer	None	None
9004-70-2	Nitrocellulose	5-10	Not Listed	E	R2
55-63-1	Nitroglycerin	0.5-2	200-240-8	E,T, N	R 3-28,33,51,53

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush out particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call at 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.


5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Explosive:</i>	Yes	<i>Flammable:</i>	Not applicable
<i>Combustible:</i>	Not applicable	<i>Pyrophoric:</i>	No
<i>Flash Point (C):</i>	Not applicable	<i>Burning Rate of Material:</i>	Not applicable
<i>Lower Explosive Limit:</i>	Not Applicable	<i>Auto Ignition Temp:</i>	No data
<i>Upper Explosive Limit:</i>	Not applicable	<i>Flammability Classification (defined by 29 CFR 1910.1200)</i>	Explosive

UNUSUAL 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 with fire reaches cargo. Cargo may explode.

HMIS RATING SYSTEM			
HEALTH HAZARD (BLUE)			0
FLAMMABILITY HAZARD (RED)			1
PHYSICAL HAZARD (YELLOW)			2
PROTECTIVE EQUIPMENT			
EYES	PER CODE	RESPIRATORY	HEARING
	A	See Section 8	See Section 8

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.

6. ACCIDENTAL RELEASE MEASURES

**FOR ALL TRANSPORTATION ACCIDENTS, CALL: Chemtrec at 1-800-424-9300
CCN796979**

Spills of this material will normally not require emergency response team capabilities. If, however, a large spill occurs, call **Chemtrec at 1-800-424-9300 CCN796979** for technical assistance. 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

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.
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 from shock and electrical discharge.
Shelf Life Limitations:	Indefinite
Incompatible Materials for Packaging:	None known
Incompatible Materials for Storage/Transportation:	None known
Conditions to Avoid:	None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7440-50-8	Copper	.02 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
7440-02-0	Nickel	.02 mg/m ³	1 mg/m ³	.02-10 mg/m ³
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 (0.2 mg/m ³) skin	Denmark: 0.02 ppm (0.2 mg/m ³) Norway, Sweden: .03ppm (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 (0.2 mg/m ³), skin
7440-31-5	Tin	2 mg/m ³	2 mg/m ³	U.K. (LTEL): 5 mg/m ³ Austria & Germany (MAK), Belgium, Finland, Denmark, The Netherlands, Poland, Switzerland: 2 mg/m ³ Hungary, Norway: 1 mg/m ³
9002-88-4	Polyethylene	None established	None established	None established
7439-89-6	Iron	None established	None established	None established
7440-33-7	Tungsten*	5 mg/m ³ 10 mg/m ³ (STEL)	None established	Denmark, Netherlands, Norway, Poland, Sweden, UK: 5 mg/m ³

**This substance is regulated by OSHA as a Particulate Not Otherwise Regulated (PNOR). The exposure limits listed for both OSHA and ACGIH refer to total dust. The OSHA PEL for the respirable fraction is 5 mg/m³.*

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

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: Not normally needed.

RESPIRATORY PROTECTION: Respiratory protection is 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 potential for exceeding established occupational exposure limits.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>	Cylindrical brass cartridge	<i>Vapor Density (air = 1):</i>	Not applicable
<i>Odor:</i>	None	<i>Boiling Point (F):</i>	Not applicable
<i>Molecular Weight:</i>	Not applicable – Mixture	<i>Melting point:</i>	Various
<i>Physical State:</i>	Solid	<i>Specific gravity (g/cc):</i>	Not applicable
<i>pH:</i>	Not applicable	<i>Bulk Density:</i>	Not applicable
<i>Vapor Pressure (mm Hg)</i>	Not applicable	<i>Viscosity (cps):</i>	Not applicable
<i>Vapor Density</i>	Not applicable	<i>Decomposition Temperature:</i>	Not applicable
<i>Solubility in water (20C)</i>	Insoluble	<i>Evaporation Rate:</i>	Not applicable
<i>Volatiles-Percentage by Volume</i>	Not applicable	<i>Octanol/water partition coefficient</i>	Not applicable

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressure

IMCOMPATIBLE 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.

11. TOXICOLOGICAL INFORMATION

POTENTIAL EXPOSURE ROUTES: 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.

ACCUTE ANIMAL TOXICITY DATA:

	<i>Oral LD₅₀</i>	<i>Dermal LD₅₀</i>	<i>Inhalation LC₅₀</i>	<i>Irritation</i>
For product	<i>Not applicable for product</i>	<i>Not applicable for product</i>	<i>Not applicable for product. Particles generated from firing may be slightly toxic.</i>	<i>Not a skin or eye irritant as a loaded round</i>
		For Components:		
Copper	<i>3.5 mg/kg mouse i.p.</i>	<i>375 mg/kg rabbit, s.c.</i>	<i>No data</i>	<i>Respiratory irritant</i>
Nitrocellulose	<i>> 5 g/kg rat</i>	<i>No data</i>	<i>No data</i>	<i>No data</i>

Zinc	No data	No data	No data	Eye irritant
Tin	No data	No data	No data	No data
Nickel	>9000 mg/kg rat	No data	No data	Skin irritant for some individuals
Nitroglycerin	105 mg/kg (rat)	>280 mg/kg (rabbit)	No data	Mild eye & skin irritant
Polyethylene	> 3 g/kg rat	No data	No data	No data
Lead styphnate	No data	No data	No data	No data
Iron	30 g/kg rat	No data	No data	Eye irritant
Tungsten	> 2 g/kg rat	> 2 g/kr rabbit	> 5 mg/l (4 hours rabbit)	Mild eye & skin irritant

SUBCHRONIC/CHRONIC TOXICITY:

CARCINOGENICITY:

MUTAGENICITY:

REPRODUCTIVE, TERATOGENICITY,
OR DEVELOPMENTAL EFFECTS:

NEUROLOGICAL EFFECTS:

INTERACTIONS WITH OTHER CHEMICALS
WHICH ENHANCE TOXICITY:

Lead has caused blood, kidney and nervous system damage in laboratory Animals.

The International Agency for Research on Cancer (IARC) lists lead as possibly Carcinogenic to humans, group 2B.

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

This product is not known or reported to cause reproductive or developmental effects.. Lead has been shown to affect fetal development including birth defects and reduce male reproductive function in laboratory animals. Dibutyl phthalate has caused reproductive and developmental effects in animal studies.

This product is not known or reported to cause neurological effects. Lead has Caused peripheral and central nervous system damage and behavioral effects in laboratory animals.

None known or reported.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: No data is available on this product. Individual constituents are as follows:

Zinc:

The following concentrations of zinc have been reported as lethal to fish:

Rainbow trout fingerlings: 0.13 mg/l, 12-24 hours.

Bluegill sunfish: 6 hr TLM = 1.9 – 3.6 mg/l (soft water, 30° C)

Rainbow trout: 4 mg/l (hard water) 3 days

Sticklebacks: 1 mg/l (soft water) 24 hours

The presence of copper appears to have a synergistic effect on the toxicity of zinc towards fish. *Pseudokirchneriella subcapitata* [static])

Nitrocellulose:

LC50 > 1000 mg/l to fish, invertebrates, and algae.

Nitroglycerin:

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

Nickel:

The following concentrations of nickel have been reported as lethal to fish:

EC50 Daphnia1: 12 (13-200) mg/l (Exposure time: 48h – Species: *Ceriodaphnia dubia* [static])

LC50 Fish 2: 1.3 mg/l (Exposure time: 96 h – Species: *Cyprinus carpio* [semistatis])

EC50 Daphnia 2: 1 mb/l (Exposure time: 48 h – Species: *Daphnia magna* [Static])

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

	U.S. DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
PROPER SHIPPING NAME:	HEVI-Duty® Non-Toxic, Frangible Bullet					
HAZARD CLASS:	1.4S	Not regulated				
UN NO:	UN 0012					
PACKING GROUP:	PGII					
HAZARD LABEL/PLACARD:	Labels not required for ground or water shipment Placards are not required (see 49FR 172.504)					
REPORTABLE QUANTITY:	For International air shipments: No special labeling requirements For domestic air shipments: No special labeling requirements					
	Not regulated					
SPECIAL COMMENTS	No special labeling requirements					

15. REGULATORY INFORMATION

U.S. FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act Inventory.			
CERCLA	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	Nitroglycerin			
SARA 313 Hazard Class	Health Acute: No Chronic: No	Fire No	Reactivity Yes	Release of Pressure: No
SARA 302 EMS List	Does not apply			

STATE RIGHT-TO-KNOW STATUS

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Copper	Not listed	X	X	X	X
Zinc	Not listed	X	Not listed	X	X
Nickel	X	X	X	X	Not listed
Nitrocellulose	Not listed	X	X	X	Not listed
Nitroglycerin	Not listed	X	X	X	Not listed
Tin	Not listed	Not listed	X	X	Not listed
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Tungsten	Not listed	Not listed	X	X	Not listed
Lead styphnate	Not listed	Not listed	Not listed	Not listed	Not listed
Polyethylene	Not listed	Not listed	Not listed	Not listed	Not listed

EUROPEAN REGULATIONS

HAZARD CLASSIFICATION:

Danger Symbol: E
Risk Phrases: R2
Safety Phrases: S2, S15 Keep out of reach of children.

German WGK Classification: Not applicable

CANADIAN REGULATIONS

DSL LIST: The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.

IDL: Not applicable

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

16. OTHER INFORMATION

REVISIONS:

REPAIRED BY: Federal Cartridge Company d/b/a Hevi Shot

NOTICE: The information in this MSDS 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. Environ-Metal, Inc. believes this information to be reliable and current as of the date of publication, but makes no warranty that it is.