



# SAFETY DATA SHEET

HEVI-Shot SDS: HEVI-Duty® Non-Toxic, Frangible Bullet  
Revision No.: 1  
Date: 6/25/2021

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** NON-TOXIC BULLET  
**Chemical Name:** Mixture  
**Synonyms:** HEVI-Duty® Non-Toxic, Frangible Bullet  
**Chemical Family:** Metal  
**Formula:** Proprietary, US and Foreign Patents-Pending  
**Product Use:** Ammunition – Bullet

**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 System (HMIS)  
National Fire Protection Association (NFPA)

**Degree of hazard (0 = low, 4 = extreme)**  
Health: 1      Flammability: 0      Physical Hazard- 0  
  
Not rated.

### **HUMAN THRESHOLD RESPONSE DATA**

Odor Threshold: Odorless  
Irritation Threshold: None as a solid bullet; however if used in a way that produces dust, can be a respiratory irritant in a non-ventilated area  
Immediately Dangerous to Life or Health (IDLH) Value (s): The IDLH for this product is not known

**POTENTIAL HEALTH EFFECTS:** Under normal handling of the product, no exposure to any harmful materials will occur. Dust produced by abrading this product in a manner for which it is not intended can be a respiratory irritant.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** There are no known medical conditions aggravated by exposure to this product in its solid form. Dust exposure can cause respiratory irritation.

**POTENTIAL ENVIRONMENTAL EFFECTS:** As a solid, this product has demonstrated no significant adverse environmental effects.



### 3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Components	% By Weight	EINECS/ELINCS#
7440-50-8	Copper Powder	0-99%	231-159-6
7439-89-6	Iron Powder	0-99%	231-096-4
7440-66-6	Zinc Powder	0-50%	231-175-3
None	Process Aids	0-2%	None

OSHA REGULATORY STATUS: The above substance is non-hazardous as a solid. Dust from frangibility events can be an irritant.

### 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: N/A

INGESTION: If ingested, immediately call a physician.

#### Medical Conditions Aggravated By Exposure:

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

#### Recommendations To Physicians:

Remove from exposure, if possible, and treat symptoms.

### 5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Explosive:</i>	Not applicable	<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>	None

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A (Note: the melting points of constituents are above 400°C).

EXTINGUISHING MEDIA: Flood area with water. If no water is available, dry sodium-chloride or sand.

SPECIAL FIREFIGHTING PROCEDURES: In case of fire, use extinguishing media that are appropriate to local circumstances and the surrounding environment.

### 6. ACCIDENTAL RELEASE MEASURES

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

Spills of this material do not require any special handling. If, however, a large spill occurs, call **Chemtrec at 1-800-424-9300 CCN796979** for technical assistance.

## 7. HANDLING AND STORAGE

Handling:

Storage:

No special requirements

Make sure the product does not come in contact with acids or Strong oxidizers.

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 Powder	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dusts and mists)	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dusts and mists)	Austria, Belgium, Canada: 0.2 mg/m <sup>3</sup> (fumes), 1 mg/m <sup>3</sup> (dusts) Denmark: 1.0 mg/m <sup>3</sup> (dust and powder) Germany (MAK): 0.1 mg/m <sup>3</sup> (fume), 1 mg/m <sup>3</sup> (dusts and mists)
7440-66-6	Zinc Powder	10 mg/m <sup>3</sup> (fume)	10 mg/m <sup>3</sup> (fume)	None Established
7439-89-6	Iron Powder	Nuisance dust: 15 mg/m <sup>3</sup>	Nuisance dust: 15 mg/m <sup>3</sup>	None Established
None	Process Aids	None Established	None Established	None Established

ENGINEERING CONTROLS:

Local exhaust ventilation is recommended if significant dusting occurs or if fumes are generated. Otherwise, use general exhaust ventilation.

EYE/FACE PROTECTION:

Not normally needed.

SKIN PROTECTION:

Not normally needed.

RESPIRATORY PROTECTION:

Respiratory protection is not normally needed.

GENERAL HYGIENCE:

Wash hands thoroughly after use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>	Metallic gray or copper	<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>	> 400 degrees C.
<i>Physical State:</i>	Solid	<i>Specific gravity (g/cc):</i>	6 -9 g/cc
<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 conditions
MATERIALS TO AVOID:	Avoid contact with acids, strong reducing or oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS:	Melted bullets may release zinc fume, a hazardous material
HAZARDOUS POLYMERIZATION:	Will not occur
INCOMPATIBLE MATERIALS:	Strong acids and oxidizing agents
OTHER:	N/A

## 11. TOXICOLOGICAL INFORMATION

**POTENTIAL EXPOSURE ROUTES:** The physical nature of this product makes absorption by any route unlikely. However, rapid firing of these bullets into steel backstops in an enclosed or poorly ventilated space will generate metallic dust that can be an eye, skin, and lung irritant.

### ACCUTE ANIMAL TOXICITY DATA:

	<i>Oral LD<sub>50</sub></i>	<i>Dermal LD<sub>50</sub></i>	<i>Inhalation LC<sub>50</sub></i>	<i>Irritation</i>
<b>Copper Powder</b>	3.5 mg/kg, ip (mouse)	375 mg/kg, sc (rabbit)	No Data	Respiratory Irritant
<b>Zinc Powder</b>	No data	No Data	No Data	Eye Irritant
<b>Iron Powder</b>	7500 mg/kg bw (Rat)	No Data	No Data	No Data
<b>Process Aids</b>	No Data	No data	No data	No Data

SUBCHRONIC/CHRONIC TOXICITY: May be harmful if swallowed

CARCINOGENICITY: No evidence of carcinogenicity

MUTAGENICITY: This product is not known or reported to be mutagenic.

REPRODUCTIVE, TERATOGENICITY, OR DEVELOPMENTAL EFFECTS: This product is not known or reported to cause reproductive or developmental effects

NEUROLOGICAL EFFECTS: This product is not known or reported to cause neurological effects

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY: None known or reported.

## 12. ECOLOGICAL INFORMATION

**ECOTOXICITY:** The product has not been tested for environmental properties.

**MOBILITY:** No data available

**PERSISTANCE/DEGRADABILITY:** No data available.

**BIOACCUMULATION:** No data available

### COMPONENTS:

#### **Copper Powder**

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 Powder**

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)

**Iron Powder**

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

The following concentration of Iron powder have been reported as lethal to fish: LC50 96 h = 13.6 mg/L (Morone saxatilis – static) LC50 96 h = 0.56 mg/L (Cyprinus carpio-semi-static)

**13. DISPOSAL CONSIDERATIONS:**

The alloys, mixtures, and constituents are not hazardous waste, and do not have hazardous waste numbers listed in 40 CFR Part 261, Appendix VIII.

**14. TRANSPORT INFORMATION**

	U.S. DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
PROPER SHIPPING NAME:	HEVI-Duty® Non-Toxic, Frangible Bullet					
HAZARD CLASS:	Not regulated					
UN NO:	Not regulated					
PACKING GROUP:	Not regulated					
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	All constituents of the bullet are listed on the TSCA inventory				
CERCLA	The RQ for copper is 5,000 lbs; the RQ for zinc is 1,000. Other constituents have no RQ				
SARA 313	Copper is a listed substance. No other constituents are listed.				
SARA 313 Hazard Class	Health Acute: No Chronic: No	Fire No	Reactivity None	Release of Pressure: No	
SARA 302 EMS List	Does not apply				
RCRA	Neither the bullet material nor the constituents of our bullet are listed as hazardous materials in 40 CFR Part 261.				

**STATE RIGHT-TO-KNOW STATUS**

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Copper Powder	Not listed	X	X	X	X
Zinc Powder	Not listed	X	Not listed	X	X
Iron Powder	Not listed	Not listed	Not listed	Not Listed	Not listed
Process Aids	Not listed	Not listed	Not listed	Not listed	Not listed

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

No components listed

**EUROPEAN REGULATIONS**

**HAZARD CLASSIFICATION:**

Danger Symbol: Not applicable  
Risk Phrases: Not applicable  
Safety Phrases: S2 Keep out of reach of children.

German WGK Classification: No constituents are listed as pollutants

**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: Copper

WHMIS: This product is not subject to WHMIS.

**16. OTHER INFORMATION**

*REVISIONS:*

*PREPARED BY:* Federal Cartridge Company d/b/a Hevi Shot

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