



SAFETY DATA SHEET

HEVI-Shot SDS: Non-Toxic Shot (Tungsten, Tin, Copper, Nickel & Iron Powder Composites) Revision 6/25/2021

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: NON-TOXIC SHOT Made from Tungsten, Nickel, Iron, Copper, and Tin
Chemical Name: Mixture – Metal Powder
Synonyms: HEVI-Shot® Powder
Chemical Family: Metal Alloy Powders
Formula: Not applicable – mixture
Product Use: Ammunition – Shot Shell

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 (for dust or fume)

Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA)

Degree of hazard (0 = low, 4 = extreme)

Health: 0 Flammability: 1 Physical Hazard- 0

Mixture: N/A



HUMAN THRESHOLD RESPONSE DATA

Odor Threshold: Unknown
Irritation Threshold: Unknown
Immediately Dangerous to Life or Health (IDLH) Value (s): None

POTENTIAL HEALTH EFFECTS

This product is composed of a tungsten, tin, copper, nickel & iron powder. It is non-toxic. Therefore, under normal handling of the product, no exposure to any harmful materials will occur. People with a skin sensitivity to nickel could have mild irritation from handling the shot.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: There are no medical conditions known to be aggravated by exposure to this product in its solid form.

POTENTIAL ENVIRONMENTAL EFFECTS: Products approved by US Fish and Wildlife Service demonstrated no significant adverse environmental effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Components	% By Weight	EINECS/ELINCS#
7440-33-7	Tungsten	60-90	231-143-9
7440-31-5	Tin	12-25	231-141-8
7440-50-8	Copper Powder	0-40	231-159-6
7440-02-0	Nickel	0-6	231-111-4
7439-89-6	Iron	0-20	231-096-4

OSHA REGULATORY STATUS: Not Applicable

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.

5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Explosive:</i>	Not applicable	<i>Flammable:</i>	No
<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
 EXTINGUISHING MEDIA: Dry sodium-chloride or sand.
 SPECIAL FIREFIGHTING PROCEDURES: In case of fire, use normal firefighting equipment.



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:	No special requirements
Storage:	No special requirements
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
7440-02-0	Nickel	0.2 mg/ m ⁷	1 mg/ m ⁷	0.2-10 mg/ m ⁷
7440-31-5	Tin	2 mg/ m ³	2 mg/ m ³	None Established
7440-50-8	Copper Powder	0.2 mg/m ³ (fume) 1 mg/m ³ (dusts and mists)	0.2 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)
7439-89-6	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 5mg/m³.

ENGINEERING CONTROLS:	Local exhaust ventilation is recommended if significant dusting occurs or if fumes are generated. Otherwise, use general exhaust ventilation.
EYE/FACE PROTECTION:	Use safety glasses.
SKIN PROTECTION:	Due to Ni content, wear impervious gloves.
RESPIRATORY PROTECTION:	Respiratory protection is not normally needed.
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
Appearance:	Metal Composite Shot	Vapor Density (air = 1):	Not applicable
Odor:	None	Boiling Point (F):	Not applicable
Molecular Weight:	Not applicable - Mixture	Melting point:	>1,500 degrees C.
Physical State:	Solid	Specific gravity (g/cc):	8-15 g/cc
pH:	Not applicable	Bulk Density:	Not applicable
Vapor Pressure (mm Hg)	Not applicable	Viscosity (cps):	Not applicable
Vapor Density	Not applicable	Decomposition Temperature:	No applicable
Solubility in water (20C)	Insoluble	Evaporation Rate:	Not applicable
Volatiles-Percentage by Volume	Not applicable	Octanol/water partition coefficient	Not applicable

10. STABILITY AND REACTIVITY

STABILITY:	Stable
MATERIALS TO AVOID:	None identified to date
HAZARDOUS DECOMPOSITION PRODUCTS:	None identified to date
HAZARDOUS POLYMERIZATION:	Will not occur.
OTHER:	N/A

11. TOXICOLOGICAL INFORMATION

POTENTIAL EXPOSURE ROUTES: The physical nature of this product makes absorption for any route unlikely. A small amount of inhalable particles may be created when projectile 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.</i>	<i>Shot can be an irritant for people with a nickel sensitivity</i>
For Components:				
<i>Nickel</i>	<i>>9000 mg/kg rat</i>	<i>No data</i>	<i>No data</i>	<i>Skin irritant for some individuals</i>
<i>Tin</i>	<i>No data</i>	<i>No data</i>	<i>No data</i>	<i>Respiratory Irritant</i>
<i>Copper Powder</i>	<i>3.5 mg/kg. ip (mouse)</i>	<i>375 mg/kg, sc (rabbit)</i>	<i>No data</i>	<i>Respiratory Irritant</i>
<i>Iron</i>	<i>30 g/kg rat</i>	<i>No data</i>	<i>No data</i>	<i>Eye irritant</i>
<i>Tungsten</i>	<i>> 2 g/kg rat</i>	<i>> 2 g/kg rabbit</i>	<i>> 5 mg/l (4 hours rabbit)</i>	<i>Mild eye & skin irritant</i>

SUBCHRONIC/CHRONIC TOXICITY:

Nickel is a possible carcinogen.

CARCINOGENICITY:

Nickel is carcinogenic by RTECS criteria.

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:

Nickel

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

LC50 Fish 1: 100 mg/l (Exposure time: 96h – Species: Brachydanio rerio)

C50 Daphnia 1: 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 [semi-statis])

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

EC50 Other Aquatic Organisms: 0.174 (0.174 – 0.311) mg/l (Exposure time: 96 h-Species: Pseudokirchneriella subcapitata [static])

Copper Copper concentrations from 0.1 to 1.0 mg/l have been found to be not toxic for most fish. However, concentration 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.

Iron 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:

Neither the alloys nor the constituents of the alloys 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:	Dead Coyote Composite Shot					
HAZARD CLASS:	Not applicable					
UN NO:	Not applicable					
PACKING GROUP:	Not applicable					
HAZARD LABEL/PLACARD:	Labels not required for ground or water shipment Placards are not required (see 49FR 172.504) For International air shipments: No special labeling required For domestic air shipments: No special labeling required					
REPORTABLE QUANTITY:	Not applicable					
SPECIAL COMMENTS	No special labeling required					

15. REGULATORY INFORMATION

U.S. FEDERAL

TSCA	All constituents of the bullet are listed on the TSCA inventory			
CERCLA	Nickel RQ = 100 lbs., Copper RQ = 5,000 lbs., Zinc RQ = 1,000 lbs., Tin = 1,000 lbs. 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	Not listed as hazardous materials in 40 CFR Part 261.			

STATE RIGHT-TO-KNOW STATUS

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Nickel	X	X	X	X	Not listed
Tin	Not listed	Not listed	X	X	Not listed
Copper	Not listed	X	X	X	X
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Tungsten	Not listed	Not listed	X	X	Not 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: Not known

CANADIAN REGULATIONS

DSL LIST: The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.
Ingredient Disclosure List: Not applicable
WHMIS: This product is not subject to WHMIS.

16. OTHER INFORMATION**REVISIONS:**

REPAIRED 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.