



SAFETY DATA SHEET

HEVI-Shot SDS: Non-Toxic Shot (Bismuth, Tin Shot) Revision 6/25/2021, Rev 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: NON-TOXIC SHOT Made from Bismuth and Tin
Chemical Name: Mixture – Metal Alloy
Synonyms: HEVI-Shot® Alloy
Chemical Family: Metal Alloy
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#
7440-69-9	Bismuth	0-95	231-177-4
7440-31-5	Tin	0-10	231-141-8

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: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL HAZARDS: Bismuth Oxides

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:	Keep containers tightly closed in a dry, cool and well
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
7440-69-9	Bismuth			
7440-31-5	Tin	2 mg/ m ³	2 mg/ m ³	None Established

*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:	Handle with gloves.
RESPIRATORY PROTECTION:	Respiratory protection is not normally needed.
GENERAL HYGIENCE:	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
<i>Appearance:</i>	Metal Alloy Shot-Silver in color	<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>	>271 degrees C.
<i>Physical State:</i>	Solid	<i>Specific gravity (g/cc):</i>	8-15 g/cc
<i>pH:</i>	Not applicable	<i>Bulk Density:</i>	Not applicable
<i>Vapor Pressure (mm Hg)</i>	<0.1 hPa(,0.1mmHg) at 20° C (68° F)	<i>Viscosity (cps):</i>	Not applicable
<i>Vapor Density</i>	Not applicable	<i>Decomposition Temperature:</i>	No 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 recommended storage conditions
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>Bismuth</i>	<i>LD50 Rat-male and female-2,000 mg/kg</i>	<i>No data</i>	<i>No data</i>	<i>No data</i>
<i>Tin</i>	<i>No data</i>	<i>No data</i>	<i>No data</i>	<i>Respiratory Irritant</i>

SUBCHRONIC/CHRONIC TOXICITY: None known.

CARCINOGENICITY: No component of this product present at levels greater than or equal to 0.1% is Identified as a carcinogen or potential carcinogen.

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:

Bismuth Toxicity to daphnia and static test EC50-Daphnia magna (Water flea) - > 100 mg/l – 48 h other aquatic (OECD Test Guideline 202) invertebrates

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:	Bismuth Alloy Shot					
HAZARD CLASS:	Not applicable					
UN NO:	Not applicable					
PACKING GROUP:	Not applicable					

<i>HAZARD LABEL/PLACARD:</i>	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
<i>REPORTABLE QUANTITY:</i>	
<i>SPECIAL COMMENTS</i>	Not applicable
	No special labeling required

15. REGULATORY INFORMATION

U.S. FEDERAL

TSCA	All constituents of the bullet are listed on the TSCA inventory			
CERCLA	Tin = 1,000 lbs. Other constituents have no RQ			
SARA 313	Does not apply			
SARA 313 Hazard Class	<i>Health</i> Acute: No Chronic: No	<i>Fire</i> No	<i>Reactivity</i> <i>None</i>	<i>Release of Pressure:</i> No
SARA 302 EMS List RCRA	Does not apply Not listed as hazardous materials in 40 CFR Part 261.			

STATE RIGHT-TO-KNOW STATUS

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Bismuth	Not listed	X	X	Not listed	Not listed
Tin	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.