SAFETY DATA SHEET

PELLETS

Cut Wire Shot & Blasting Abrasives

MATERIAL IDENTIFICATION AND USE

Material Name: Zinc Cut Wire Products, All Grades

Manufacturer: Pellets LLC
Address: 63 Industrial Drive
N. Tonawanda, NY 14120

Tel: 716-693-1750
Fax: 716-693-1880
E: info@pelletsllc.com

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Revision Number: 8

1. IDENTIFICATION

GHS PRODUCT IDENTIFIER: ZINC METAL

OTHER MEANS OF IDENTIFICATION: ZINC SHOT,ZINC CUT WIRE SHOT, ZCW

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTION OF USE:
Solid zinc cut wire products have many uses including, shot blasting, tumbling, etc.

MANUFACTURERS DETAILS: Pellets LLC 63 Industrial Dr. N. Tonawanda, NY 14120

PHONE & EMERGENCY NUMBER: Phone: 716-693-1750 EMERGENCY: 716-693-1750

2. HAZARD IDENTIFICATION

Classification: Zinc metal is considered an article and **NOT** hazardous in solid form. However, cetain processes such as blasting, tumbling, cutting, grinding, melting, and welding could result in some hazardous materials being emitted.

SIGNAL WORD, HAZARD STATEMENTS & SYMBOLS: Not Applicable

Precautionary Statements:

PREVENTION	FIRST AID RESPONSE
Do not breath dust/fume/gas/vapor/spray Use in well ventilated areas Wash thoroughly after handling Do not eat, drink or smoke when handling this product Do not handle until all safety precautions have been read and understood.	**Eyes**: Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention if eye irritation persits **Skin:** Wash affected area with mild soap and water. Seek medical attention if skin irritation persists. **Inhalation:** Remove to fresh air. Check for clear airway, breathing and presence of pulse. If necessary administer CPR. Consult physician immediately.

Contaminated work clothing should not be allowed out of the workplace.	**Ingestion:** Dust may irritate mouth and gastrointestinal tract. If ingested, seek medical attention immediately.
STORAGE	**DISPOSAL**
Store away from acids and incompatible materials Store in accordance with federal/provincinal/state or local regulations	Zinc metal scrap should be recycled whenever possible Otherwise, dispose of in accordance with applicable federal/ provincinal/state or local regulations

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

All values are expressed as weight percent and are approximate. The percent composition reflects the range that is possible within this group of products. These are not technical specifications for a particular product.

COMPONENT	CAS NUMBER	PERCENT
Zinc	7440-66-6	99.9+

4. FIRST AID MEASURES

EYE CONTACT: Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention if eye irritation persits

SKIN CONTACT: If skin irritation develops wash affected area with mild soap and water. Seek medical attention if skin irritation persists.

INHALATION: Remove to fresh air. Check for clear airway, breathing and presence of pulse. If necessary administer CPR. Consult physician immediately

INGESTION: If significant amounts of dust are ingested consult a physician.

MOST IMPORTANT SYMPTOMS/EFFECTS BOTH ACCUTE AND DELAYED:

Zinc metal as a solid is not likely to present an acute or chronic health effects. However, during processing such as blasting, cutting, grinding, melting, tumbling and welding emitted byproducts may cause irritations, difficulty in breathing, coughing or wheezing. May also cause allergic skin reactions.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT, IF NECESSARY:

Notes to Physician: May cause sensitization by skin contact or inhalation. Treat symptomatically.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Smother and cool with a suitable dry extinguishing agent (class D fires). Do not use water if possible. Use water only when necessary, such as to cool containers exposed to fire. Extreme caution should be taken to prevent contact with molten zinc or burning zinc products.

SPECIFIC HAZARDS ARISING FROM MATERIAL:

The pressure in sealed containers can increase under the influence of heat.

HAZARDOUS COMBUSTION PRODUCTS:

Not applicable for a solid formed zinc. Toxic metal and metallic oxide fumes may be evolved from fires involving finely divided zinc.

SPECIAL FIRE FIGHTING INSTRUCTIONS:

For solid formed zinc, as appropriate for surrounding fire. Firefighters should wear self-contained NIOSH approved breathing apparatus and full protective clothing when fumes and/or smoke from fire is present. Do not release runoff from fire control methods to sewers or waterways. Direct water stream will scatter and spread flames; therefore, should not be used.

EXPLOSION DATA: Solid formed zinc metal does not constitute a fire or explosion hazard. However, finely divided suspended particles may present a fire and explosion hazard in the presence of an ignition source.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Not applicable to zinc metal in solid state. Avoid dust formation. Ensure adequate ventilation. Clean-up personnel should be protected against inhalation and eye and skin contact.

ENVIRONMENTAL PRECAUTIONS: Do not release into sewers or waterways.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

Not applicable for zinc metal in solid state. For spills involving fine dusts, remove by vacuuming with HEPA filter or wet sweeping methods to prevent spread of dust. Avoid inhalation of dust.

7. HANDLING AND STORAGE

PRECAUTIONS OF SAFE HANDLING:` Not applicable to zinc metal in solid state. Operations with the potential for generating high concentrations of airborne particles should be evaluated and controlled as necessary. Avoid breathing metal fumes/ or dust. Practice good housekeeping as cut wire can be a safety hazard under foot due to its shape. Spills should be cleaned from floors immediately. Be alert to sharp edges and unsecured lifts. Observe maximum floor loading limits as cut wire is very dense and weighs approximately 270 lbs per cubic foot.

CONDITIONS FOR SAFE STORAGE:` Store in a cool well ventilated area. Keep away from heat. Inspect periodically for damage or leaks. Store away from incompatible materials (acids, bases and oxidizers)

INCOMPATIBLE PRODUCTS: ` Store away from acids, bases, oxidizers and incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters: There are no exposure limits for stainless steel. The exposure limit for iron-containing fumes has been established at 5 mg.m^3 with ACGIH's TWA. The individual complex compounds with the fume may have lower exposure limits than the general fume.

COMPONENTS	CAS Number	OSHA PEL (MG/M^3)	ACGIH TLV (MG/M^3)
Zinc	7440-66-6	5.0 mg/m^3 (as zinc oxide fume) 15.0 mg/m^3 (as total dust) 5.0 mg/m^3 (as respirable fraction)	2.0 mg/m^3 (as zinc oxide)

Note: Additional air makeup systems may be required if local exhaust or ventilation systems are not sufficient to maintain exposure levels to contaminants below prescribed limits. When inhalation controls are not sufficient to reduce the exposure to below the applicable exposure limit then use OSHA/NIOSH approved respiratory protection within the limitations of the respirator. OSHA PEL's and Threshold Limit Values (TLV) established by the Occupational Health and Safety Administration and the American conference of Governmental Industrial Hygienists (ACGIH) are 8 hour time weighted average concentrations unless otherwise noted.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION - CONTINUED

APPROPRIATE ENGINEERING CONTROLS:	Local and general exhaust ventilation should be used to keep worker exposure below exposure limits during blasting, tumbling, welding, cutting, grinding, machining and other processes which may generate airborne contaminants.
INDIVIDUAL PROTECTIVE MEASURES:	Dependent upon process being performed on material. Each operation must be evaluated for suitable equipment prior to using material.
GLOVES:	Suitable for protection against any physical injury and skin contact during handling.
EYES:	Safety glasses or goggles should be worn when there is possibility of flying particles or elevated levels of dust or fume.
CLOTHING:	Appropriate work clothing as determined by user
RESPIRATOR:	If concentrations exceed established limits use NIOSH/MSHA approved particulate respirators (dust & fume or high efficiency dust and fume)
FOOTWARE	Steel toe work boots recommended or as determined by user
OTHER:	N/A

9. CHEMICAL AND PHYSICAL PROPERTIES

PHYSICAL STATE	Solid	**APPEARANCE**	Solid Silver/Grey Metallic
ODOR	Odorless	**ODOR THRESHOLD**	Not Applicable
Ph	Not Applicable	**MELTING POINT**	788 Degrees F
BOILING POINT	1665 Degrees F	**FLASH POINT**	Not Applicable
EVAPORATION RATE	Not Applicable	**FLAMABILITY (SOLID, GAS)**	Not flammable
UPPER FLAMMABLE LIMIT %	Not Applicable	**LOWER FLAMABLE LIMIT**	Not Applicable
VAPOR PRESSURE	Not Applicable	**VAPOR DENSITY**	Not Applicable
RELATIVE DENSITY	Not Applicable	**SPECIFIC GRAVITY**	7.14 g/cm^3
SOLUBILITY	Slightly (< 2mg/L)	**PARTICIAN COEFFICIENT**	No data
AUTO IGNITION TEMP	Not Applicable	**DECOMPOSITON TEMP.**	No data
VISCOSITY	Not Applicable		
OTHER INFO	Not Applicable		

10. STABILITY AND REACTIVITY

REACTIVITY: Not determined for product in solid form

CHEMICAL STABILITY: Stable under normal conditions of transport, storage and use for solid formed product.

POSSIBILITY OF HAZARDOUS REACTIONS:
Hazardous polymerization will not occur

CONDITIONS TO AVOID: Direct sources of heat

INCOMPATIBEL MATERIALS: Acids. Bases and Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS:
During certain operations such as blasting, tumbling, welding, burning, melting metal dust/fumes (zinc oxide) may be generated.

11. TOXILOGICAL INFORMATION

Note: Zinc metal is considered an article and not hazardous in solid form. However, cetain processes such as blasting, tumbling, cutting, grinding, melting, and welding could result in some hazardous materials being emitted. The following toxicology informaiton has been determined for **Zinc Metal** by using the information available for its components applied to the guidance on the preparation of an SDS under GHS rrequirements of OSHA and the EU CPL:

COMPONENT	LD_{50} ORAL	LD_{50} DERMAL	LD_{50} INHALATION	OTHER
Zinc Metal	NE	NE	NE	NE

NE – None Established

LIKELY ROUTES OF ENTRY:

EYES: High concentrations of dust may cause irritation to eyes.

SKIN: Prolonged skin contact with dust may cause skin irritation to sensitive individuals.

INHALATION: Inhalation of zinc metal particulate or elemental oxide fumes generated during, blasting, tumbling, welding, burning, melting, grinding or machining may pose acute or chronic health effects.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:
None for zinc metal in its natural solid state

EFFECTS OF ACUTE EXPOSURE TO THE MATERIAL:
Zinc: Inhalation overexposure to zinc may cause metal fume fever characterized by fever and chills (flu like symptoms) with metallic taste which appear 4-6 hours after exposure with no long term effects.

11. TOXILOGICAL INFORMATION - CONTINUED

EFFECTS OF CHRONIC EXPOSURE TO THE MATERIAL:

Zinc: There is no chronic form of metal fume fever, but in rare instances an acute incident may be followed by complaints of bronchitis or pneumonia. Some workers have developed a short-term immunity (resistance) so that repeated exposure to zinc oxide does not cause metal fume fever. This immunity is quickly lost after short absences from work (vacations/weekends). Workers exposed to finely divided zinc for up to 35 years revealed no acute or chronic illnesses attributable to zinc. Prolonged or repeated skin contact with zinc dust or powder may cause dryness, irritation and cracking (dermatitis) since zinc is astringent and may tend to draw moisture from the skin. Zinc is not listed as a human carcinogen by OSHA, the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), the American Conference of Governmental Industrial Hygienists (ACGIH) or the European Union (EU).

SPECIFIC TARGET ORGAN TOXICITY (STOT) – SINGLE EXPOSURE:
No data for zinc metal

SPECIFIC TARGET ORGAN TOXICITY (STOT) – REPEATED EXPOSURE:
No data for zinc metal

MUTAGENICITY OF MATERIAL: No data for zinc metal

REPRODUCTIVE EFFECTS: No data for zinc metal

TERATOGENICITY OF MATERIAL: Not applicable for zinc metal

CARCINOGENICITY OF MATERIAL: **Zinc:** Zinc is not listed as a human carcinogen by OSHA, the National Toxicology Program (NTP), and the International Agency for Research on Cancer (IARC), the American Conference of Governmental Industrial Hygienists (ACGIH) or the European Union (EU).

SYNERGISTIC OF MATERIALS: Not applicable for zinc metal

ASPIRATION HAZARD No data for zinc metal

SENSITIZATION OF MATERIAL: No data for zinc metal

LD_{50} OF MATERIAL: None established for zinc metal

LC_{50} OF MATERIAL: None established for zinc metal

REFERENCES: International Agency for Research on Cancer (IARC) summaries & evaluation (2008).
3rd annual report on carcinogens as prepared by the National Toxicology Program (NTP) iron containing welding fume has an exposure limit of 5 mg/m^3 (ACGIH-TLV's 2011).

12. ECOLOGICAL INFORMATION

ECOTOXICITY (aquatic & terrestrial):	No data available as shipped or sold. Zinc metal is not an environmental hazard, processing may lead to the release of zinc compounds in bioavailable forms generated from use of zinc metal in processing.
PERSISTENCE AND DEGRADABILITY:	No data available as shipped or sold
BIOACCUMULATIVE POTENTIAL:	No data available as shipped or sold
MOBILITY ON SOIL:	Not applicable as shipped or sold
ADDITIONAL INFORMATION:	Hazard Category: Not applicable as shipped or sold Hazard Symbol: Not applicable as shipped or sold Hazard Statement: Not applicable as shipped or sold Signal Word: Not applicable as shipped or sold

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS:	Zinc scrap should be recycled whenever possible
CONTAINER CLEANING AND DISPOSAL:	Dispose of in accordance with applicable federal, provincial/state or local regulations.

14. TRANSPORTATION INFORMATION

GENERAL SHIPPING INFORMATION:	Zinc metal is not regulated for shipping.
SHIPPING NAME AND DESCRIPTION:	Non-regulated material
UN NUMBER:	Non-regulated material
HAZARD CLASS:	Non-regulated material
PACKAGING GROUP/RISK GROUP:	Not applicable
TRANSPORT REGUALTIONS:	Canadian Transportation of Dangerous Goods Regulations (TDG) March 2011 US Department of Transportation (DOT) Hazardous materials shipping regulations (Title 49 – Transportation March 2011)

Note: Zinc metal does not have a Transport Dangerous Goods (TDG) classification.

15. REGULATORY INFORMATION

Note: Zinc metal is considered an article and not hazardous in solid form. However, cetain processes such as blasting, tumbling, cutting, grinding, melting, and welding could result in some hazardous materials being emitted. <u>The following regulatory informaiton is for the hazardous elements which may be emitted during the above processes.</u>

REGULATORY INFORMATION:	The following listing of regulation relative to Pellets LLC products may not be complete and should not be solely replied upon for all regulatory compliance responsibilities.

15. REGULATORY INFORMATION - CONTINUED

OSHA REGULATIONS: Air contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): This product as a whole is listed. Refer to SECTION 8, Exposure Controls and Personal Protection of this document.

CHEMICAL NAME	SARA 302 (40 CFR 355, APENDIX A)	SARA 304 (40 CFR TABLE 302.4)	SARA 313 (40 CFR 372.65)	CERCLA REPORTABLE QUANTITIES
*Zinc (Fume or Dust)	No	No	Yes	1000 lbs

CERCLA REPORTABLE QTY (RQ) Sec 103: Zinc is listed and RQ = 1,000 lbs (454 kg); however, reporting is not required when diameter of the pieces of solid metal released is equal to or exceeds 100 micrometers (0.004 inches).

EPCRA SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCES: No

EPCRA SECTION 311/312 HAZARD CATEGORIES: No Hazard categories apply

EPCRA SECTION 313 Toxic Release Inventory: This product does contain zinc metal 100% by weight not subject to Toxic Release Reporting requirements. Potential by-products from working with this product – *Zinc (fume or dust) CAS 7440-66-6 are reportable.

STATE REGULATIONS: The product **zinc metal** as a whole is not listed in any state regulations. However, individual components of the products are listed in various state regulations.

CALIFORNIA (PROPOSTION 65): The zinc component of this material is known in the state of California to cause cancer and reproductive toxicity.

PENNSYLVANIA: Pennsylvania R-T-K List: zinc listed as hazardous substance and environmental hazard.

NEW JERSEY: New Jersey R-T-K List: zinc listed as hazardous substance and environmental hazard.

CANADIAN REGULATIONS:

INGREDIENTS LISTED ON THE DOMESTIC SUBSTANCE LIST: YES

WHMIS CLASSIFICATION: Not applicable as Zinc metal is not a controlled product under Controlled Products Regulation (CPR)

EUROPEAN UNION:

LISTED ON THE EUROPEAN INVENTORY OF EXISTING COMMERICAL CHEMICAL SUBSTANCES (EINECS): YES

EU GHS CLP CLASSIFICATION: Zinc metal is not classified

15. REGULATORY INFORMATION - CONTINUED

REFERENCES:

RCRA	Resource Conservation Recovery Act (42 USC Sec. 6921; 40CFR Part 261 APP VIII)
SARA	Superfund Amendments and Reauthorization Act 1986 Title III Sec 302 Extremely Hazardous Substances (42 USC Secs. 11023,13106; 40 CFR sec. 372.65) and Section 313 Toxic Chemicals (42 USC secs. 11023, 13106;40 CFR Sec. 372.65 [as of 6-30-05])
TSCA	Toxic Substance Control Act (15 USC s/s2601 et seq [1976])
SDWA	Safe Drinking Water Act (42 USC s/s's 300f et sec. [1974])
CAA	Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 (As of 8-18-06)
CWA	Clean Water Act (33 USC Secs. 1311;1314(b), (c), (e), (g); 136(b), (c), 137(b) [as of 8-2-06])
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 USC Secs. 9601(14, 9603(a); 40 CFR Sec. 302.4, table 302.4 and App A)

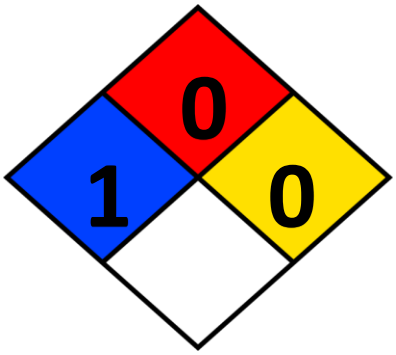
16. OTHER INFORMATION

Zinc metal

HAZARD LABEL RATING SYSTEM:

NATIONAL FIRE PROTECTION CODE:

NFPA H= 0 F= 0 R=0



HAZARDOUS MATERIALS IDENTIFICATION SYSTEM:

HMIS CODE: H=1* F=0 R=0 PPE (SEE SECTION 8)

*Denotes possible chronic health hazard if airborne dusts and fumes are generated

HEALTH	**1***
FLAMMABILITY	**0**
REACTIVITY	**0**
OTHER	

16. OTHER INFORMATION - CONTINUED

PREPARED BY: PELLETS LLC

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship**. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose or application.** Therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

ABBREVIATIONS AND ACRONYMS:

DOT:	US Dept. of Transportation
ACGIH:	American Conference of Governmental Industrial Hygienists.
CAS:	Chemical Abstract Service (Division of American Chemical Society)
NFPA:	National Fire Protection Association (USA)
HMIS:	Hazardous Materials Identification System (USA)
LC_{50}:	Lethal concentration – 50 percent
LD_{50}:	Lethal dose – 50 percent