

MATERIAL SAFETY DATA SHEET



Hornady GMX™ Bullets

MSDS REV. DATE: 01/11/09

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Hornady GMX™ Bullets

TRADE NAMES: GMX™

SYNONYMS AND VARIATIONS: Bullets, projectiles

MANUFACTURER: Hornady Manufacturing Company

ADDRESS: 3625 W. Old Potash Hwy
Grand Island, NE 68803

EMERGENCY PHONE: 800-338-3220

CHEMTREC PHONE: 800-424-9300 CHEMTREC INTERNATIONAL: +703-527-3887

OTHER CALLS: (308) 382-1390

PRODUCT USE: Firearm projectiles

PREPARED BY: M. Spencer

HMIS® Ratings

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	A

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:

NAME	CAS#	%WT	313	OSHA PEL TWA (mg/m ³)	ACGIH TLV TWA (mg/m ³)
Copper	7440-50-8	94.0-96.0	Yes	1.0 (Dust)	1.0 (Dust)
Lead	7439-92-1	<0.05	Yes	0.05	0.05
Zinc	7440-66-6	3.9-6.0	Yes	15 (dust)	N/A

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Not hazardous in solid form. Dust and fume may be hazardous. Do not take internally. Byproducts of use may be harmful if inhaled. Avoid long-term contact with skin/ clothing.

NOTE CONCERNING LEAD: Throughout this document hazard information for lead is provided; however, given the minute concentration of lead in this product it is extremely unlikely that hazardous exposure could occur during normal use.

ROUTES OF ENTRY: Inhalation, ingestion, eyes

POTENTIAL HEALTH EFFECTS

EYES: None during normal handling. Firing projectiles may result in airborne particles/fragments. Particles/fragments may cause irritation or eye injury if safety glasses are not used.

SKIN: Minimal irritation. Wash hands after handling and before eating, drinking or smoking to reduce chances of ingestion.

INGESTION: Ingestion of copper in large amounts of dust may cause nausea, diarrhea or stomach pain. Ingestion of lead dust or fume can eventually lead to damage to central and peripheral nerves, blood and kidneys. It may also cause damage to male reproductive system and, in females, to the unborn fetus. Damage to nerves can cause reduced motor nerve and muscle function. May cause anemia. Lead has been identified as an animal carcinogen and may produce cancer in humans.

INHALATION: Inhalation of dust may cause respiratory irritation. Inhalation of large amounts of fume may cause flu-like symptoms known as "Metal Fume Fever". Effects usually disappear within 24 hours.

ACUTE HEALTH HAZARDS: **Lead** Ingestion/Inhalation may cause irritation to nose, throat, upper respiratory tract and lungs. The irritant effects may lead to bronchitis, headache, fall in blood pressure, weakness, convulsions, and collapse. Severe poisoning may impair vision by damaging the optic nerve. Particulates from firing: Eye irritation or injury, skin irritation. Inhaling large amounts of **copper** dust may cause nasal and respiratory irritation as well as nausea and vomiting. **Zinc** ingestion may cause headache, nausea, fever.

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CHRONIC HEALTH HAZARDS: Ingestion or inhalation of **lead** may have effects on the blood , bone marrow , central nervous system , peripheral nervous system and kidneys , resulting in anemia, encephalopathy (e.g., convulsions), peripheral nerve disease, abdominal cramps and kidney impairment. Causes toxicity to human reproduction or development. Prolonged or repeated exposure to **copper** dust may cause more severe irritation or dermatitis. Prolonged or repeated inhalation of **copper** dust or fume may cause increased respiratory irritation.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Respiratory conditions easily aggravated by airborne dust or particulates.

CARCINOGENICITY

OSHA: No IARC: Possible (group 2b) (lead)
OTHER: EPA: Probable human carcinogen (lead)

SECTION 3 NOTES: The physical form of these products makes it unlikely that exposure of any significant amount will occur. Exposure is most likely during ammunition loading operations and can easily be mitigated by sensible hygiene practices; always wash hands after handling projectiles, especially before eating or using tobacco. Firing ammunition will produce small particles that could contain minute amounts of the chemicals listed in section 1. Greatest exposure will occur if firing takes place indoors. See section 8 for exposure controls.

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush out fume or particles with large amounts of water for at least 15 minutes. If irritation develops, call physician.

SKIN: Wash affected skin thoroughly with soap and water.

INGESTION: Not a likely source of exposure, however if dust is ingested drink water to dilute. If symptoms develop consult a physician.

INHALATION: If signs of lung irritation occur, remove victim to fresh air immediately. If breathing has stopped, give CPR and get medical attention immediately.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A
(% BY VOLUME) LOWER: N/A

FLASH POINT:

F: N/A

C: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE:

F: N/A

C: N/A

HMIS HAZARD CLASSIFICATION

HEALTH: 1

FLAMMABILITY: 0

Physical: 0

OTHER:

EXTINGUISHING MEDIA: Not relevant to this product. Choose extinguishing media suitable to surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES: Use SCBA.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides, fumes and dusts from metals listed in section 1.

SECTION 5 NOTES:

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SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Spills will not normally require emergency response. If spill is large or other assistance is required, call 800-338-3220 or CHEMTREC at 800-424-9300.

SECTION 6 NOTES: See section 15 for reportable quantities of spilled material.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool, dry area. Wash hands after handling.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use of proper range filtration and airflow when firing projectiles indoors.

VENTILATION: None required during normal handling and loading. Use mechanical ventilation when firing projectiles indoors to maintain exposures below PEL. Ventilation should not be required outdoors.

RESPIRATORY PROTECTION: Not normally needed.

EYE PROTECTION: Safety glasses

SKIN PROTECTION: Not normally needed, wash hands after handling.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use adequate hearing protection when firing projectiles.

WORK HYGIENIC PRACTICES: Wash hands thoroughly after handling and before eating, drinking or using tobacco.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Cylindrical copper-colored projectile with polymer point.

ODOR: None

PHYSICAL STATE: Solid

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT: N/A

MELTING POINT: N/A

FREEZING POINT: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): N/A

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: Insoluble

PERCENT SOLIDS BY WEIGHT: 100%

PERCENT VOLATILE: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

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MOLECULAR WEIGHT: N/A, Mixture
VISCOSITY: N/A
SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID (STABILITY): Open flame/high heat (melting).

INCOMPATIBILITY (MATERIAL TO AVOID): Acids and caustics

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Oxides, fume and dusts from metals listed in section I.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

	Lead	Copper	Zinc
LD-50 (oral)	N/A	1,000 mg/m ³	7,950 mg/Kg (mouse)
LC-50 (inhalation)	N/A	>2,000 mg/m ³	2,500 mg/m ³ (mouse)
IDLH	100 mg/m ³	100 mg/m ³	500 mg/ m ³

SECTION 11 NOTES: The extremely low concentration of lead in this product makes it highly unlikely that harmful exposure could occur.

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: This product has no ecological information available. Individual component information is as follows:

Lead: Toxic to waterfowl, high concentrations may be toxic to other aquatic species. Lead may migrate through soil and surface/ground water. Lead will accumulate in the environment through decomposition or fragmentation of projectile. Will not biodegrade.

Copper: Toxic to aquatic species. Concentration required for toxicity varies with water chemistry, light transmittance and other factors. Generally accepted level for aquatic toxicity is >1.0mg/L.

Zinc: Depending on conditions, as little as .13mg/L may be toxic to some species.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Recycle product if at all possible. The user of this product is responsible for seeing that it is disposed of in accordance with all federal, state and local laws. For more information regarding disposal or recycling of this product contact the manufacturer.

RCRA HAZARD CLASS: Not a hazardous waste

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
NOT REGULATED AS HAZARDOUS MATERIAL

AIR TRANSPORTATION
NOT REGULATED AS HAZARDOUS MATERIAL

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

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TSCA (TOXIC SUBSTANCE CONTROL ACT): Components are listed on the Toxic Substances Control Act Inventory.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): CERCLA RQ's: Lead= 10 lbs., Copper= 5,000 lbs., Antimony= 5,000 lbs., Zinc= 1,000 lbs. Reporting is not required for metals (lead, copper, antimony and zinc) if the mean diameter of the particle is greater than .004 inches.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: see section 1

STATE REGULATIONS (Right-To-Know):

New Jersey: Copper, Lead, Zinc

Pennsylvania: Copper, Lead,

Massachusetts: Copper, Lead, Zinc

Michigan: Copper, Lead, Zinc

CA. PROPOSITION 65: Lead

SECTION 15 NOTES: *Not intended to be all-inclusive, only selected regulations represented.*

SECTION 16: OTHER INFORMATION

DISCLAIMER: Hornady Manufacturing Company believes the information contained in this MSDS to be accurate and complete as of the date of publication, however no responsibility is assumed for the suitability of this data to the end user or for omissions or errors in its content. This sheet should be provided to all who use, handle, transport or store the material in question.