

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and Pistol Ammunition

MSDS DATE: 09/28/11

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Hornady® Centerfire Rifle and Pistol Ammunition

TRADE NAMES: Superformance™, TAP® FPD™, TAP® BARRIER™, TAP® URBAN™, TAP PRECISION®, TAP® TRAINING™, TAP®CQ™, Varmint Express™, Critical Defense™, Custom Interbond™, Custom™ SST®, Custom™ Rifle, Light Mag SST®, Heavy Mag SST®, Light Mag Interbond™, Heavy Mag Interbond™, Custom™ Handgun, Dangerous Game Series™, LEVERevolution®, Hornady® Match™ (incl. 50 BMG), STEEL MATCH™; Does not apply to ammunition loaded with GMX™, NTX™, or MonoFlex™ bullets

SYNONYMS: Cartridges, small arms ammunition

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 ammunition

PREPARED BY: M. Spencer

HMIS® Ratings

HEALTH	0
FLAMMABILITY	0
REACTIVITY	2
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)
Aluminum	7429-90-5	0-3.0	Yes	5.0 (dust/fume)	5.0 (dust/fume)
Antimony	7440-36-0	0-2.5	Yes	0.5	0.5
Antimony Sulfide	7440-36-0	<1	Yes	0.5 (as Sb)	0.5 (as Sb)
Barium Nitrate	7440-39-3	<1	Yes	0.5	0.5
Copper	7440-50-8	5-60	Yes	1.0 (Dust)	1.0 (Dust)
Dibutyl phthalate	84-74-2	0-1.3	Yes	5.0	5.0
2,4 Dinitrotoluene	121-14-2	<1	Yes	1.5	N/A
Diphenylamine	122-39-4	<1	Yes	N/A	N/A
Lead	7439-92-1	5-50	Yes	0.05	0.05
Lead Styphnate	12403-82-6	<1	Yes	0.05 (as Pb)	0.05 (as Pb)
Nickel	7440-02-0	0-<1	Yes	1.0	N/A
Nitrocellulose	9004-70-0	5-20	No	N/A	N/A
Nitroglycerin	55-63-0	0-2.5	Yes	.2 (STEL)	0.46 (Skin)
Pentaerythrite Tetranitrate	78-11-5	0-<1	N/A	N/A	N/A
Tetracene	109-27-3	0-<1	No	N/A	N/A
Zinc	7440-66-6	<1-20	Yes	15 (dust)	N/A

SECTION 2 NOTES:

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Do not take internally. Keep away from sources of ignition. Explosive. Avoid subjecting product to physical shock/ impact. Some byproducts of use may be harmful if inhaled. Avoid ingesting lead- always wash hands after handling.

ROUTES OF ENTRY: Inhalation, ingestion, eyes

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and
Pistol Ammunition

MSDS DATE: 09/28/11

POTENTIAL HEALTH EFFECTS

EYES: Use of product 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 use and before eating, drinking or smoking to reduce chances of ingestion.

INGESTION: 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 lead dust/fume may lead to the effects described above (Ingestion), as well as respiratory irritation.

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. Nitroglycerin may cause dilation of blood vessels, resulting in lowered blood pressure. Zinc ingestion may cause headache, nausea, fever.

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. May cause harm to human reproduction or development processes.

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

SECTION 3 NOTES: The physical form of these products makes it unlikely that exposure of any significant amount will occur. Exposure is very unlikely during normal handling and firing. 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: If ingested, call physician immediately.

INHALATION: If signs of lung irritation occur, remove victim to fresh air immediately. If respiration has stopped administer 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

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and
Pistol Ammunition

MSDS DATE: 09/28/11

FLASH POINT:

F: N/A

C: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE:

F: N/A

C: N/A

HMS HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 0

Reactivity: 2

OTHER:

EXTINGUISHING MEDIA: Water preferably, otherwise carbon dioxide or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Flood area with water to cool exposed product and extinguish fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Classified as explosive threat. Low to moderate velocity projectiles and localized detonations (generally confined to the immediate vicinity of the packages). Use normal fire fighting equipment including face shield and SCBA. If product is likely to ignite, withdraw all personnel to a distance of at least 50 ft. and fight fire using normal precautions.

HAZARDOUS DECOMPOSITION PRODUCTS: Lead oxides, lead dust or fume, carbon monoxide, nitrogen oxides.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Spills will not normally require emergency response. Do not expose product to mechanical shock, electrical shock or impact. Spilled product can be pickup up by any non-spark, non-impact tools/methods. If spill is large or other assistance is required, call 800-338-3220 or CHEMTREC at 800-424-9300.

SECTION 6 NOTES: If cartridges are damaged or ruptured be very careful to avoid all sources of ignition.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool, dry location. Do not expose to excessive heat, flame or other sources of ignition. Avoid mechanical shock and electrical discharge. Refer to section 10 for reactivity information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use of proper range filtration and airflow as well as sound deadening material for indoor firing.

VENTILATION: Use mechanical ventilation if product is utilized 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

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use adequate hearing protection when using firearms.

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

SECTION 8 NOTES: WARNING: FIRED PROJECTILES MAY CAUSE SERIOUS INJURY OR DEATH. Use ammunition ONLY in firearms that are of the correct caliber and in good condition. ALWAYS keep the muzzle pointed in a safe direction. Projectiles have extremely long range, always be certain to have an adequate backstop. To avoid ricochet, do not fire at water, rocks or other hard or flat surfaces.

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and
Pistol Ammunition

MSDS DATE: 09/28/11

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Brass case (may be blackened or silver nickel plated); or laquered or polymer coated steel case. Projectile may be all lead, copper jacketed lead or brass jacketed lead.

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

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): Mechanical shock, electrical discharge, extreme heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Acids, caustics, strong oxidizers.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Lead oxides, lead fume, lead dust, carbon monoxide, nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will not occur

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

	Lead	Antimony	Barium	Copper	Dibutyl phthalate	Nitrocellulose	Nitroglycerine	Zinc
LD-50 (oral)	N/A	7 g/Kg (rat)	187 mg/Kg (rat)	1,000 mg/m ³	3474 mg/Kg (mouse)	>5 g/kg	1607 mg/Kg (rabbit)	7,950 mg/Kg (mouse)
LC-50 (inhalation)	N/A	N/A	N/A	>2,000 mg/m ³	25 mg/m ³ (2H) (mouse)	N/A	N/A	2,500 mg/m ³ (mouse)
IDLH	100 mg/m ³	50 mg/m ³	50 mg/m ³	100 mg/m ³	9300 mg/ m ³	N/A	75 mg/m ³	500 mg/ m ³

SECTION 11 NOTES: Under conditions of intended use and expected incidental exposure, greatest potential toxicity is from lead.

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and
Pistol Ammunition

MSDS DATE: 09/28/11

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.

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.

Dibutyl phthalate: Fathead minnow: 1.3 mg/L (96H)

Nitrocellulose: LC-50>1,000 mg/L (aquatic invertebrates, fish, algae)

Nitroglycerine: LC-50 (96 hour) 1.228 mg/L (bluegill)

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

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Product that has become waste must be considered hazardous and disposed of accordingly. 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 of this product contact the manufacturer.

RCRA HAZARD CLASS: D003, D008, depending on condition.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Cartridges, Small Arms

HAZARD CLASS: 1.4 S

ID NUMBER: UN 0012

PACKING GROUP: II

LABEL STATEMENT: None for highway/ water/ rail; 1.4 placard for individual packages over 1001 lbs.

AIR TRANSPORTATION

PROPER SHIPPING NAME: Cartridges, Small Arms

HAZARD CLASS: 1.4S

ID NUMBER: UN 0012

PACKING GROUP: II

LABEL STATEMENTS: 1.4S label

SECTION 14 NOTES: Product may be reclassified domestically as ORM-D (through 12/31/2013) or as hazardous material in Limited Quantities (beginning 1/1/11) if packaged per 49 CFR 173.63. Package may then be marked ORM-D per 49 CFR 172.316; or as Limited Quantities per 49 CFR 172.315.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

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., Dibutyl phthalate= 10 lbs., 2,4 Dinitrotoluene= 10 lbs., Nickel= 100 lbs., Nitroglycerin= 10 lbs., Zinc= 1,000 lbs. Reporting is not required for metals (lead, copper, antimony, nickel and zinc) if the mean diameter of the particle is greater than .004 inches.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Nitroglycerin if above threshold.

311/312 HAZARD CATEGORIES: Release of Pressure

313 REPORTABLE INGREDIENTS: see section 1

STATE REGULATIONS (Right-To-Know):

California: Dibutyl phthalate

MATERIAL SAFETY DATA SHEET



Centerfire Rifle and
Pistol Ammunition

MSDS DATE: 09/28/11

Massachusetts: Copper, Dibutyl phthalate, Lead, Nitrocellulose, Nitroglycerin, Antimony, Zinc
Michigan: Copper, Lead, Antimony, Zinc
Minnesota: Dibutyl phthalate
New Jersey: Copper, Dibutyl phthalate, Lead, Nitrocellulose, Nitroglycerin, Antimony, Zinc
Pennsylvania: Copper, Dibutyl phthalate, Lead, Nitrocellulose, Nitroglycerin, Antimony

CA. PROPOSITION 65: Lead, Lead styphnate

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