Nosler
UP FRONT

Safety Data Sheet

SECTION 1: Product and Company Identification

Product Name: Nosler Ammunition That Contains Lead
Manufacturer: Nosler, Inc.
Address: 107 S.W. Columbia Street
Bend, OR 97702
Business Phone: 800/285-3701 or 541/382-3921
Date Prepared: 1/19/16
Date Revised: 3/2/18
Emergency Telephone Number: ChemTel Number Within United States, Canada, Puerto Rico, and U.S. Virgin Islands Toll free 800/255-3924 Contract #MIS6412505
Outside U.S.. Canada, Puerto Rico, and U.S. Virgin Islands 1/813/248-0585

SECTION 2: Hazard Identification

US DOT Symbols

GHS Hazard Symbols

Hazard Statements

H204: Fire or projection hazard
H360: May damage fertility or the unborn child
H372: Causes damage to central nervous system, kidneys, liver, through prolonged or repeated exposure
H411: Toxic to aquatic life with long lasting effects
H317: May cause an allergic skin reaction
H335: May cause respiratory irritation

Signal Word

Danger

Routes of Entry:	**Inhalation**	**Skin**	**Ingestion**
When processing, shooting, or handling product	Dust, vapor, and/or fume generated while firing ammunition may be irritating to the respiratory system and can results in both acute and chronic overexposure	Dust, vapor and/or fume is not readily absorbed through the skin	Dust, vapor, fume, and/or reside may be absorbed by the digestive system and can result in acute and chronic overexposure from poor personal hygiene

Health Hazards (Acute and Chronic):

Acute Overexposure: If left untreated: headache, chills, nausea, weakness, vomiting, loss of appetite, uncoordinated body movements, convulsions, stupor, and coma. If the metal fume is inhaled, mild irritation may result to the throat, upper respiratory tract, and lungs. The metal fume may also produce influenza – like symptoms, known as metal fume fever. Symptoms of this reaction may include metallic taste, runny nose, nausea, fever and chills. These effects usually disappear within 24 hours.

Chronic Overexposure: If left untreated: weakness, insomnia, hypertension, slight irritation to skin and eyes, metallic taste in mouth, anemia, constipation, headache, muscle, and joint pains, metal fume fever, ulceration of the nasal septum, neuromuscular dysfunction, paralysis, and encephalopathy. Lead exposure can pose a risk to developing fetuses and may impair the reproductive systems in men and women. Damage to kidneys, red blood cell forming, and central nervous system may occur. Inhalation of large amounts of the dust and/or fume of this product may cause lung inflammation, which may progress to bronchitis and permanent lung damage.

Carcinogencity:

Copper, Tin, Antimony, Barium Nitrate, Acetal Polymer Resin, Nitrocellulose, Nitroglycerine, Graphite, Lead Styphnate, and Zinc are not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

Nickel compounds are known to be a cancer causing agent based on evidence of carcinogenicity from studies on humans. Metallic nickel is reasonably expected to be a cancer causing agent based on experiments of experimental animals. NIOSH considers nickel compounds to be potential occupational carcinogens as defined by the OSHA carcinogen policy [29 CFR 1990].

Lead is classified as a possible carcinogen by IARC (group 2B), reasonably anticipated to be a human carcinogen by NTP, and a probable human carcinogen by EPA.

Medical Conditions Generally Aggravated by Exposure:
Asthma and emphysema may be aggravated by exposure to the dust or fume.

SECTION 3: Composition/Information on Ingredients

Hazardous Components/Common Names		OSHA PEL	% by Weight
Copper (CAS #7440-50-8)	Dust:	1 mg/m³	55 to 61
	Fume:	0.1 mg/m³	
Lead (CAS #7439-92-1)		0.05 mg/m³	10 to 14
Tin (CAS #7440-31-5)		2.0 mg/m³	0 to 1
Antimony (CAS #7440-36-0)		0.5 mg/m³	0 to 1
Zinc/Zinc Oxide (CAS #7440-66-6)		Not Est.	13 to 16
(CAS #1314-13-2)		Not Est.	0 to 1
Nitrocellulose (CAS #9004-70-0)		Not Est.	10 to 14
Nitroglycerine (CAS #55-63-0)		2 mg/m³ (Skin)	0 to 2
Lead Styphnate (CAS #12403-82-6)		Not Est.	<1
Graphite (Synthetic) (CAS #7782-42-5)		15 mg/m³ (Total dust)	<1
Barium Nitrate (CAS #7440-39-3)		.5 mg/m³	<1
Acetal Polymer Resin (CAS #25231-38-3)	Total Dust:	15mg/m³	0 to 1
	Respirable Dust:	5mg/m³	
Nickel Plating (CAS #7440-02-0)		1 mg/m³	0 to 1

SECTION 4: First-Aid Measures

Emergency and First Aid Procedures:

Eyes: Flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get immediate medical attention.

Skin: Wash thoroughly with soap and water. If irritation develops, call a physician. If clothing comes in contact with the product, the clothing should be laundered before re-use.

Inhalation: Remove from exposure to fresh air. Get medical attention if experiencing effects of overexposure.

Ingestion: Get immediate medical attention

Notes to Physician regarding Lead:
Lead and its inorganic compounds are neurotoxins, which may produce peripheral neuropathy. For an overview of effects of lead exposure, consult OSHA Appendix A of Occupational Exposure to Lead (29CFR1910.1025).

SECTION 5: Fire-Fighting Measures

Flash Point
N/A

Autoignition
160°C to 180°C

Flammability Classification: (defined by 29 CFR 1910.1200)
Explosive

Extinguishing Media
Dry chemical or carbon dioxide should be used on surrounding fire.

Special Fire Fighting Procedures
Use full body protective clothing, full facepiece, self-contained breathing apparatus (SCBA) operated in positive-pressure mode.

Unusual Fire and Explosion Hazards
When heated to decomposition or the point of melting, metals may produce fume, vapor and/or dust that may be toxic and/or respiratory irritants. If heated above 200° C may explode.

HMIS Hazard Classification
Health: 0 Flammability: 1 Reactivity: 2 Other: N/A

SECTION 6: Accidental Release Measures

Spills will not normally require emergency response. However, spills of this material should be handled carefully as improper cleanup could result in a fire or explosion. Only use non-sparking tools when cleaning up a spill. Do not subject the spilled material to open flame, static discharge, friction, shock, excessive heat, or mechanical impact. Particulate matter should be stored in dry containers for later disposal. Do not use compressed air or dry sweeping as a means of cleaning up a spill.

Call ChemTel Within United States, Canada, Puerto Rico, and U.S. Virgin Islands Toll free 800/255-3924.
Reference Contract #MIS6412505.
Outside U.S.. Canada, Puerto Rico, and U.S. Virgin Islands 1/813/248-0585

SECTION 7: Handling and Storage

After contact with loaded cartridge, thoroughly wash hands with soap and water. Store ammunition in a dry area where accidental contact with acids is not possible.

Do not subject ammunition or box to open flame, static/electricsl discharge, friction, shock, excessive heat, or mechanical impact.

SECTION 8: Exposure Controls/Personal Protection

Respiratory Protection:
Respiratory protection not normally needed. If significant dusting occurs or fumes are generated, wear a NIOSH / MSHA approved respirator.

Ventilation Requirements:
Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation.

Protective Gloves:
Gloves should be worn when handling this product

Eye Protection:
Safety glasses should be worn when handling or shooting this product.

Hearing Protection:
Hearing protection should be worn when using this product.

Other Protective Clothing or Equipment:
Coveralls, or other full body clothing, should be worn during product use and properly laundered after use. Personal clothing and shoes should be protected from contamination with this product.

Other Precautions:

For Lead, Lead Styphnate, and Nickel:
Precautionary Statement:
There are two major means of heavy metal absorption: namely, inhalation and ingestion. Most inhalation problems can be prevented with adequate use of aforementioned ventilation and respirator information. Always exercise normal, good personal hygiene prior to smoking or eating. Smoking and eating should be confined to non-contaminated areas.

Work clothes and equipment should remain in designated lead contaminated areas, and never taken or laundered with personal clothing. Launder contaminated clothing before reuse.

Wash hands, face, neck, and arms thoroughly before eating or smoking.

This product is intended for industrial use only, and should be isolated from children and their environment. Caution

must be exercised not to expose anyone to the smoke fumes and dust generated from the use of this product. Do not smoke while using this product.

In accordance with California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), the following statement is issued: **WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects, or other reproductive harm.**

Adhere to all personal protection equipment procedures when handling, and ventilation requirements when heavy metal exposures are above permissible exposure limits or threshold limit values.

Before using this product be familiar with the information contained in the Federal Standard for Occupational Exposure to Lead (29CFR1910.1025).

SECTION 9: Physical and Chemical Properties

Boiling Point
- Copper=2, 595°C
- Lead=1,740°C
- Tin=2,507°C
- Antimony=1,587°C
- Zinc=907°C
- Acetal Polymer Resin=N/A

Specific Gravity (H2O=1.0 g/cc)
- Copper=8.92 g/cc
- Lead=11.34 g/cc
- Tin=7.31 g/cc
- Antimony=6.66 g/cc
- Zinc=7.14 g/cc
- Acetal Polymer Resin= >1

Vapor Pressure (mm Hg)
- Copper=N/A
- Lead=0 mm (approx.)
- Tin=1 mm at 1,492°C
- Antimony=1 mm at 886°C
- Zinc=N/A
- Acetal Polymer Resin=NA

Melting Point
- Copper=1,083°C
- Lead=328°C
- Tin=232°C
- Antimony=630°C
- Zinc=420°C
- Acetal Polymer Resin=175°C to 183°C

Vapor Density (Air=1)
- N/A (all constituents)

Evaporation Rate (Butyl Acetate=1)
- N/A (all constituents)

Solubility in Water
- Insoluble

Appearance and Odor
- Red/Gold metallic color with colored plastic tip in select product lines. Odorless, except bullets with plastic tips may exhibit a slight smell of formaldehyde if melted. Any exposed lead will exhibit a dull or shiny blue/gray appearance.

Viscosity
- N/A

Volatile Organic Compounds (VOC)
- N/A

pH	Freezing Point
N/A	N/A
Density	**Octano/water partition coefficient**
N/A	N/A

SECTION 10: Stability and Reactivity

Stability: Stable under normal conditions.

Incompatibility (Materials to Avoid): Strong acids, caustics, or oxidizers may liberate hydrogen gas.

Hazardous Decomposition or Byproducts: Copper, antimony, and lead fumes, zinc oxide fume, formaldehyde fume, heavy metal fume, vapor, and/or dust.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Extreme heat, static/electrical discharge, mechanical shock/crushing of cartridge or box.

SECTION 11: Toxicological Information

Under normal conditions of use, no acute or chronic health effects are expected for skin contact, eye contact, or through ingestion. A small amount of inhalable fumes may be created when cartridge is fired. Exposure to nickel has caused skin irritation in some subjects.

LD-50 (oral)	LC-50 (inhalation)	IDLH
Copper 1,000 mg/m³	Copper >2,000 mg/m³	Copper 100 mg/m³
Zinc 7,950 mg/kg (mouse)	Zinc 2,500 mg/m³ (mouse)	Zinc 500 mg/m³
Lead N/A	Lead N/A	Lead 100 mg/m³
Antimony 7 g/kg (rat)	Antimony N/A	Antimony 50 mg/m³
Tin >2,000 mg/kg bodyweight (rat)	Tin >5 g/m³ (rat)	Tin 100 mg/m³
Barium Nitrate 187 mg/kg (rat)	Barium Nitrate N/A	Barium Nitrate 50 mg/m³
Nitrocellulose >5 g/kg	Nitrocellulose N/A	Nitrocellulose N/A
Nitroglycerine 1,607 mg/kg (rabbit)	Nitroglycerine N/A	Nitroglycerine 75 mg/m³
Nickel Data Not Available (animals)	Nickel Data Not Available (animals)	Nickel 10 mg/m³
Graphite (Synthetic) N/A	Graphite(Synthetic) N/A	Graphite (Synthetic) N/A
Lead Styphnate N/A	Lead Styphnate N/A	Lead Styphnate N/A

SECTION 12: Ecological Information

Copper is toxic to aquatic species and the generally accepted level for toxicity is > 1.0 mg/l.

Zinc may be toxic to some species with as little as .13 mg/l.

Lead is a toxic metal and can accumulate in individual organisms including humans, waterfowl, soil, and will not biodegrade. In high enough concentrations, lead can be toxic to aquatic organisms.

Nitrocellulose LC50 >1,000 mg/l (aquatic invertebrates, fish, algae)

Nitroglycerine LC50 (96 hour) = 1.228 mg/l (bluegill)

Antimony is a moderate ecological hazard. This product may be dangerous to plants and/or wildlife. Harmful to fish and other water organisms.

Tin itself and its products of degradation are not toxic.

Acetal Polymer Resin= N/A

Nickel no data available for the material as a whole. However, individual components of the material have been found to be toxic to the environment. Metal dusts may migrate into the soil and groundwater and be ingested by wildlife.

SECTION 13: Disposal Considerations

Copper, Nickel, Lead, Antimony, Tin, Acetal Polymer Resin, and Zinc can be recycled. Dispose of containers and product in accordance with State, Federal, local, and international regulations.

RCRA Hazard Class: D003/Reactive for Nitrocellulose and Nitroglycerine. D008 for Lead.

SECTION 14: Transport Information

Regulatory Information for US DOT, IATA, IMO, ADR

Proper Shipping Name:	Cartridges, small arms
Hazard Class:	1.4S
UN ID Number:	UN0012
Packing Group:	II

Regulatory Information for IMDG

Proper Shipping Name:	Cartridges, small arms
Hazard Class:	1.4S
UN ID Number:	UN0012

Label Codes:	1.4S
EmS-No. (Fire)	F-B
EmS-No. (Spillage)	S-X

This product is classified as dangerous goods under IATA, IMO, ADR.

U.S. DEPARTMENT OF TRANSPORTATION SHIPPING REGULATIONS: This product is classified as dangerous goods under 49 CFR 172.101. Note: May be reclassified domestically as an ORM-D if packaged as a consumer commodity per 49 CFR 173.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is classified as Dangerous Goods.

SECTION 15: Regulatory Information

SARA 311/312: Hazard Classifications: Release of Pressure
SARA 313: Copper, Zinc (fume or dust), Lead, Nitroglycerine, Antimony, Nickel, Barium Nitrate, Lead Styphnate
SARA Title III: Nitroglycerine if above threshold
TSCA: Components are listed on the Toxic Substances Control Act inventory
CERCLA RQ's: Copper @ 5,000 pounds, Zinc @ 1,000 pounds, Nitroglycerine @ 10 pounds, Lead @ 10 pounds Antimony @ 5,000 pounds, and Nickel @ 100 pounds. No reporting is required for copper, antimony, nickel, and zinc if the mean diameter of the particle is equal to or exceeds 100 micrometers (.004 inches).

State Regulations under Right-To-Know:

Massachusetts: Copper, Lead, Zinc, Antimony, Nitrocellulose, Nitroglycerine
Michigan: Copper, Lead, Antimony, and Zinc
New Jersey: Copper, Lead, Zinc, Antimony, Nitrocellulose, Nitroglycerine
Pennsylvania: Copper, Lead, Antimony, Nitrocellulose, Nitroglycerine
California: No Components are Listed

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): **WARNING: This product contains Lead, Lead Styphnate, and Nickel which are recognized by the state of California to cause cancer and/or birth defects.**

GHS Classification: Explosive Division 1.4

SECTION 16: Other Information

Information contained and presented in this SDS is given in good faith. However, no warranty is expressed or implied and no responsibility is assumed for errors or omissions in its content.