

## Safety Data Sheet



### Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

#### 1.1 Product identifier

- Product Name** • **Component Bullets (Centerfire & Muzzleload)**  
**Synonyms** • Centerfire Pistol Bullets; Centerfire Revolver Bullets; Centerfire Rifle Bullets

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)** • Reloading cartridges for hunting or target shooting.

#### 1.3 Details of the supplier of the safety data sheet

- Manufacturer** • Remington Arms  
2592 AR HWY 15 N  
Lonoke, AR 72086  
United States  
www.remington.com  
**Telephone (General)** • 501-676-3161

#### 1.4 Emergency telephone number

- Manufacturer** • (800) 424-9300 - CHEMTREC  
**Manufacturer** • 501-676-3161 - Company Emergency Telephone Number

### Section 2: Hazards Identification

#### EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

#### 2.1 Classification of the substance or mixture

- CLP**
- Acute Toxicity Oral 3 - H301
  - Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
  - Carcinogenicity 1A - H350
  - Reproductive Toxicity 1A - H360
  - Specific Target Organ Toxicity Repeated Exposure 1 - H372
  - Specific Target Organ Toxicity Repeated Exposure 2 - H373
  - Hazardous to the aquatic environment Acute 1 - H400
  - Hazardous to the aquatic environment Chronic 1 - H410

#### 2.2 Label Elements

CLP

**DANGER**



- Hazard statements** • H301 - Toxic if swallowed  
 H335 - May cause respiratory irritation  
 H350 - May cause cancer.  
 H360 - May damage fertility or the unborn child.  
 H372 - Causes damage to organs through prolonged or repeated exposure.  
 H373 - May cause damage to organs through prolonged or repeated exposure.  
 H400 - Very toxic to aquatic life  
 H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

- Prevention** • P201 - Obtain special instructions before use.  
 P202 - Do not handle until all safety precautions have been read and understood.  
 P260 - Do not breathe dust or fume.  
 P264 - Wash thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 P271 - Use only outdoors or in a well-ventilated area.  
 P273 - Avoid release to the environment.  
 P281 - Use personal protective equipment as required.

- Response** • P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.  
 P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 P330 - Rinse mouth.  
 P314 - Get medical advice/attention if you feel unwell.  
 P308+P313 - IF exposed or concerned: Get medical advice/attention.  
 P391 - Collect spillage.

- Storage/Disposal** • P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
 P405 - Store locked up.  
 P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**2.3 Other Hazards**

**CLP**

- May form combustible dust concentrations in air. Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Exposure to antimony can cause what are known as antimony spots which is a rash characterized by papules and pustules that resembles chicken pox. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

**United States (US)**

According to: OSHA 29 CFR 1910.1200 HCS

**2.1 Classification of the substance or mixture**

**OSHA HCS 2012**

- Acute Toxicity Oral 3  
 Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation  
 Carcinogenicity 1A  
 Reproductive Toxicity 1A  
 Specific Target Organ Toxicity Repeated Exposure 1  
 Specific Target Organ Toxicity Repeated Exposure 2  
 Combustible Dust  
 Hazards Not Otherwise Classified - Health Hazards - Metal fume fever; Causes antimony spots;

**2.2 Label elements**

**OSHA HCS 2012**

**DANGER**



- Hazard statements** • Toxic if swallowed  
 May cause respiratory irritation  
 May cause cancer.  
 May damage fertility or the unborn child.  
 Causes damage to organs through prolonged or repeated exposure.  
 May cause damage to organs through prolonged or repeated exposure.  
 May form combustible dust concentrations in air.

**Precautionary statements**

- Prevention** • Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Do not breathe dust or fume.  
 Wash thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 Call a POISON CENTER or doctor/physician if you feel unwell.  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
 Rinse mouth.  
 IF exposed or concerned: Get medical advice/attention.  
 Get medical advice/attention if you feel unwell.

- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Supplemental information** • 96.8 percent of this product consists of an ingredient of unknown toxicity.

**2.3 Other hazards**

**OSHA HCS 2012**

- Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Exposure to antimony can cause what are known as antimony spots which is a rash characterized by papules and pustules that resembles chicken pox. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

**Section 3 - Composition/Information on Ingredients**

**3.1 Substances**

- Material does not meet the criteria of a substance.

**3.2 Mixtures**

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments

Lead	CAS:7439-92-1 EC Number:231-100-4	64% TO 100%	NDA	EU CLP: Carc. 2, H351 (Inhl); Repr. 1A, H360 (Orl, Inhl); STOT RE 1, H372 (CNS, GI / Orl, Inhl); Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Comb. Dust; Carc. 2 (Inhl); Repr. 1A (Orl, Inhl); STOT RE 1 (CNS, GI / Orl, Inhl)	0% (Copper Slugs)
Copper	CAS:7440-50-8 EC Number:231-159-6	0% TO 33%	NDA	EU CLP: STOT SE 3: Resp. Irrit., H335 OSHA HCS 2012: Comb. Dust; STOT SE 3: Resp. Irrit.	NDA
Zinc	CAS:7440-66-6 EC Number:231-175-3 EU Index:030-001-00-1	0% TO 4%	NDA	EU CLP: Not Classified OSHA HCS 2012: Comb. Dust; Hazard Not Otherwise Classified - Health Hazard - Metal fume fever	NDA
Antimony	CAS:7440-36-0 EINECS:231-146-5	0% TO 2.5%	Ingestion/Oral-Rat LD50 • 100 mg/kg	EU CLP: Acute Tox. 3, H301; Repr. 2, H361d (Derm, Inhl); STOT RE 2, H373 (Lungs, Inhl); Aquatic Chronic 2, H411 OSHA HCS 2012: Comb. Dust; Acute Tox. 3 (Orl); Repr. 2 (Derm, Inhl); STOT RE 2 (Lungs, Inhl); Hazard Not Otherwise Classified - Health Hazard - Causes Antimony spots	NDA
Arsenic	CAS:7440-38-2 EC Number:231-148-6 EU Index:033-001-00-X	0% TO 0.7%	Ingestion/Oral-Rat LD50 • 763 mg/kg	EU CLP: Annex VI, Table 3.1: Acute Tox. 3 *, H331; Acute Tox. 3 *, H301; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Carc. 1A; Acute Tox. 4 (Orl); STOT RE 2 (Liver, Peripheral Nervous System, Bone Marrow)	NDA

See Section 16 for full text of H-statements.

## Section 4 - First Aid Measures

### 4.1 Description of first aid measures

#### Inhalation

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. If signs/symptoms develop, move person to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.

#### Skin

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Wash skin with soap and water. If signs/symptoms develop, get medical attention.

#### Eye

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Remove contact lenses if worn. Flush eyes with water for at least 15 minutes. If signs/symptoms develop, get medical attention.

#### Ingestion

- First aid is not expected to be necessary if material is used under ordinary conditions and as recommended. Give plenty of water to drink. Induce vomiting (only in conscious persons) Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

### 4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

### 4.3 Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

- No specific actions or treatments recommended related to exposure to this material.

## Section 5 - Firefighting Measures

### 5.1 Extinguishing media

**Suitable Extinguishing Media** • Water, carbon dioxide, dry chemical, earth.

**Unsuitable Extinguishing Media** • No data available.

## 5.2 Special hazards arising from the substance or mixture

**Unusual Fire and Explosion Hazards** • Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Hazardous Combustion Products** • No data available

## 5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Evacuate area. Flood fire with water to fight fire and cool shells. If no water is available, use carbon dioxide, dry chemical or earth. Fight fire with normal precautions from a reasonable distance.

## Section 6 - Accidental Release Measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**Personal Precautions** • Do not walk through spilled material. Do not strike or crush the rounds.

**Emergency Procedures** • Eliminate all ignition sources. Use normal clean up procedures. Contain spill and monitor for excessive dust accumulation. Avoid unnecessary personnel and equipment traffic in the spill area.

### 6.2 Environmental precautions

- No special environmental precautions necessary.

### 6.3 Methods and material for containment and cleaning up

**Containment/Clean-up Measures** • Avoid generating dust. Use clean nonsparking tools to collect material. Carefully shovel or sweep up spilled material and place in suitable container. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

### 6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## Section 7 - Handling and Storage

### 7.1 Precautions for safe handling

**Handling** • Do not use in areas without adequate ventilation. Handle with care. Do not strike or crush the rounds (cartridges). Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Use personal protective equipment as required. Avoid breathing dust or fume. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

### 7.2 Conditions for safe storage, including any incompatibilities

**Storage** • Keep only in the original container. Store in a cool, dry, well-ventilated place. Keep away from sources of ignition – No Smoking. Do not subject to mechanical shock. Keep out of reach of children. This product must not be stored with acids, strong oxidizers or caustics.

## 7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

Exposure Limits/Guidelines					
	Result	ACGIH	Germany DFG	NIOSH	OSHA
Copper (7440-50-8)	TWAs	0.2 mg/m <sup>3</sup> TWA (fume)	Not established	1 mg/m <sup>3</sup> TWA (dust and mist); 0.1 mg/m <sup>3</sup> TWA (fume)	0.1 mg/m <sup>3</sup> TWA (fume); 1 mg/m <sup>3</sup> TWA (dust and mist)
	Ceilings	Not established	0.02 mg/m <sup>3</sup> Peak (respirable fraction)	Not established	Not established
	MAKs	Not established	0.01 mg/m <sup>3</sup> TWA MAK (including inorganic copper compounds, respirable fraction)	Not established	Not established
Antimony	TWAs	0.5 mg/m <sup>3</sup> TWA	Not established	0.5 mg/m <sup>3</sup> TWA	0.5 mg/m <sup>3</sup> TWA
Arsenic (7440-38-2)	TWAs	0.01 mg/m <sup>3</sup> TWA	Not established	Not established	Not established
	Ceilings	Not established	Not established	0.002 mg/m <sup>3</sup> Ceiling (15 min)	Not established
Zinc (7440-66-6)	Ceilings	Not established	0.4 mg/m <sup>3</sup> Peak (respirable fraction); 4 mg/m <sup>3</sup> Peak (inhalable fraction)	Not established	Not established
	MAKs	Not established	0.1 mg/m <sup>3</sup> TWA MAK (respirable fraction); 2 mg/m <sup>3</sup> TWA MAK (inhalable fraction)	Not established	Not established
Lead	TWAs	0.05 mg/m <sup>3</sup> TWA	Not established	0.050 mg/m <sup>3</sup> TWA	50 µg/m <sup>3</sup> TWA

### Exposure Control Notations

#### ACGIH

- Lead (7439-92-1): **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Lead as Lead, inorganic compounds: **Carcinogens:** (A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans)
- Arsenic (7440-38-2): **Carcinogens:** (A1 - Confirmed Human Carcinogen)

#### Germany TRGS

- Lead (7439-92-1): **Developmental Toxins:** (Category 1 (bioavailable, metal)) | **Reproductive Toxins:** (Category 3 (bioavailable, metal))

#### Germany DFG

- Copper (7440-50-8): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to)
- Zinc (7440-66-6): **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to (respirable fraction); no risk to embryo/fetus if exposure limits adhered to (inhalable fraction))
- Lead (7439-92-1): **Carcinogens:** (Category 2 (considered to be carcinogenic for man))
- Lead as Lead, inorganic compounds: **Carcinogens:** (Category 2 (considered to be carcinogenic for man, as Pb except lead arsenate and lead chromate))
- Antimony (7440-36-0): **Carcinogens:** (Category 2 (considered to be carcinogenic for man))
- Arsenic (7440-38-2): **Carcinogens:** (Category 1 (causes cancer in man))

### Exposure Limits Supplemental

#### ACGIH

- Copper (7440-50-8): **TLV Basis - Critical Effects:** (metal fume fever (fume))
- Copper as Copper compounds: **TLV Basis - Critical Effects:** (gastrointestinal (dust and mist); irritation (dust and mist))

- Lead (7439-92-1): **BEIs:** (30 µg/100 ml Medium: blood Time: not critical Parameter: Lead (Note: Women of child bearing potential, whose blood Pb exceeds 10 µg/dL, are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 µg/dL. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficits. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.)) | **TLV Basis - Critical Effects:** (CNS and PNS impairment; hematologic effects)
- Lead as Lead, inorganic compounds: **BEIs:** (30 µg/100 ml Medium: blood Time: not critical Parameter: Lead (Note: Women of child bearing potential, whose blood Pb exceeds 10 µg/dL, are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 µg/dL. If the blood Pb of such children remains elevated, they may be at increased risk of cognitive deficits. The blood Pb of these children should be closely monitored and appropriate steps should be taken to minimize the child's exposure to environmental lead.)) | **TLV Basis - Critical Effects:** (CNS and PNS impairment; hematologic effects)
- Antimony (7440-36-0): **TLV Basis - Critical Effects:** (skin and upper respiratory tract irritation)
- Antimony as Antimony compounds: **TLV Basis - Critical Effects:** (skin and upper respiratory tract irritation)
- Arsenic (7440-38-2): **BEIs:** (35 µg As/L Medium: urine Time: end of workweek Parameter: Inorganic arsenic plus methylated metabolites (background)) | **TLV Basis - Critical Effects:** (lung cancer)

## 8.2 Exposure controls

### Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal Protective Equipment

#### Respiratory

- Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

#### Eye/Face

- Wear safety glasses.

#### Skin/Body

- Wear protective clothing

### Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

### Additional Protection Measures

- Hearing protection recommended when firing rounds.

#### Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

BEI = Biological Exposure Indices

TLV = Threshold Limit Value determined by the American Conference of Governmental Industrial Hygienists (ACGIH)

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

NIOSH = National Institute of Occupational Safety and Health

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

#### Material Description

Physical Form	Solid	Appearance/Description	Brass, Copper and/or Gray solid with no odor.
Color	Brass, Copper and/or Gray colors.	Odor	No odor.
Odor Threshold	Data lacking		

#### General Properties

Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	93.3 C(199.94 F)	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Density	Data lacking

Water Solubility	Negligible < 0.1 %	Solvent Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
<b>Volatility</b>			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
<b>Flammability</b>			
Flash Point	121 C(249.8 F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
<b>Environmental</b>			
Octanol/Water Partition coefficient	Data lacking		

## 9.2 Other Information

- No additional physical and chemical parameters noted.

## Section 10: Stability and Reactivity

### 10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

- Stable under normal temperatures and pressures.

### 10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

- Flames, sparks, percussion, shock, static, high temperatures (266°F or 130°C, or above)

### 10.5 Incompatible materials

- Acids, strong oxidizers, caustics

### 10.6 Hazardous decomposition products

- No data available.

## Section 11 - Toxicological Information

### 11.1 Information on toxicological effects

Components	
Copper (0% TO 33%)	7440-50-8 <b>Acute Toxicity:</b> Ingestion/Oral-Mouse TDLo • 108 mg/kg; <i>Behavioral:Tremor</i> ; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; <i>Gastrointestinal:Nausea or vomiting</i> ; Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i> ; Ingestion/Oral-Mouse TDLo • 232 mg/kg; <i>Kidney, Ureter, and Bladder:Changes primarily in glomeruli</i> ; <i>Blood:Changes in spleen</i> ; <i>Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol)</i> ; <b>Multi-dose Toxicity:</b> Ingestion/Oral-Rabbit TDLo • 3 g/kg 60 Day(s)-Continuous; <i>Cardiac:Other changes</i> ; <i>Liver:Hepatitis (hepatocellular necrosis), zonal</i> ; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i> ; <b>Reproductive:</b> Ingestion/Oral-Rat TDLo • 1520 µg/kg (22W pre); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i> ; Ingestion/Oral-Rat TDLo • 152 mg/kg (22W pre); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Central nervous system</i> ; Ingestion/Oral-Rat TDLo • 1210 µg/kg (35W pre); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality</i> ; <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality</i> ; <b>Tumorigen / Carcinogen:</b> Ingestion/Oral-Mouse TDLo • 10.08 mg/kg 12 Week(s)-Continuous; <i>Tumorigenic:Carcinogenic</i>



		<b>by RTECS criteria; Lungs, Thorax, or Respiration:Other changes</b>
Zinc (0% TO 4%)	7440-66-6	<b>Irritation:</b> Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; <b>Tumorigen / Carcinogen:</b> Ingestion/Oral-Mouse TDLo • 12.6 mg/kg 46 Week(s)-Continuous; <i>Tumorigenic:</i> <b>Carcinogenic by RTECS criteria; Gastrointestinal:Tumors; Tumorigenic:Facilitates action of known carcinogen</b>
Lead (64% TO 100%)	7439-92-1	<b>Acute Toxicity:</b> Ingestion/Oral-Woman TDLo • 450 mg/kg 6 Year(s); <i>Peripheral Nerve and Sensation:Flaccid paralysis without anesthesia (usually neuromuscular blockage); Behavioral:Hallucinations, distorted perceptions; Behavioral:Muscle weakness;</i> Inhalation-Human TCLo • 10 µg/m³; <i>Gastrointestinal:Gastritis; Liver:Other changes;</i> <b>Multi-dose Toxicity:</b> Ingestion/Oral-Rat TDLo • 43.75 mg/kg 1 Week(s)-Continuous; <i>Blood:Other changes; Kidney, Ureter, and Bladder:Other changes in urine composition; Biochemical:Metabolism (intermediary):Porphyrin, including bile pigments;</i> Inhalation-Human TCLo • 0.011 mg/m³ 26 Week(s)-Intermittent; <i>Brain and Coverings:Other degenerative changes;</i> Inhalation-Man TCLo • 0.03 mg/m³ 5 Year(s)-Intermittent; <i>Endocrine:Androgenic;</i> Inhalation-Man TCLo • 0.109 mg/m³ 5 Year(s)-Intermittent; <i>Reproductive Effects:Paternal Effects:Spermatogenesis;</i> <b>Mutagen:</b> Cytogenetic analysis • Ingestion/Oral-Monkey • 42 mg/kg 30 Week(s); Cytogenetic analysis • Inhalation-Rat • 23 µg/m³ 16 Week(s); <b>Reproductive:</b> Ingestion/Oral-Rat TDLo • 790 mg/kg (multigenerations); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Effects on Embryo or Fetus:Fetal death;</i> Inhalation-Rat TCLo • 10 mg/m³ 24 Hour(s)(1-21D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system</i>
Antimony (0% TO 2.5%)	7440-36-0	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 100 mg/kg; Inhalation-Human TCLo • 10 mg/m³ 8 Hour(s); <i>Behavioral:Muscle weakness; Gastrointestinal:Nausea or vomiting; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Body temperature increase;</i> Inhalation-Human TCLo • 13.5 mg/m³ 4 Hour(s); <i>Sense Organs and Special Senses:Olfaction:Other changes; Blood:Hemorrhage;</i> <b>Tumorigen / Carcinogen:</b> Inhalation-Rat TCLo • 50 mg/m³ 7 Hour(s) 52 Week(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Tumors</i>
Arsenic (0% TO 0.7%)	7440-38-2	<b>Acute Toxicity:</b> Ingestion/Oral-Rat LD50 • 763 mg/kg; <i>Behavioral:Ataxia; Gastrointestinal:Hypermotility, diarrhea;</i> <b>Mutagen:</b> Sister chromatid exchange • Ingestion/Oral-Human • 0.211 mg/L 15 Year(s); Cytogenetic analysis • Ingestion/Oral-Human • 0.211 mg/L 15 Year(s); Cytogenetic analysis • Ingestion/Oral-Mouse • 280 mg/kg 8 Week(s); <b>Reproductive:</b> Ingestion/Oral-Mouse TDLo • 187 mg/kg (8-18D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Hepatobiliary system;</i> Ingestion/Oral-Rat TDLo • 580 µg/kg (30W pre/1-20D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Ingestion/Oral-Rat TDLo • 605 µg/kg (35W pre); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality; Reproductive Effects:Effects on Fertility:Post-implantation mortality</i>

GHS Properties	Classification
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Acute toxicity	EU/CLP • Acute Toxicity - Oral 3 OSHA HCS 2012 • Acute Toxicity - Oral 3 - ATEmix (Orl) = 128 mg/kg
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Carcinogenicity 1A OSHA HCS 2012 • Carcinogenicity 1A
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

<b>STOT-RE</b>	<b>EU/CLP</b> • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2 <b>OSHA HCS 2012</b> • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2
<b>STOT-SE</b>	<b>EU/CLP</b> • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation <b>OSHA HCS 2012</b> • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
<b>Toxicity for Reproduction</b>	<b>EU/CLP</b> • Toxic to Reproduction 1A <b>OSHA HCS 2012</b> • Toxic to Reproduction 1A

**Potential Health Effects**

**Inhalation**

- Acute (Immediate)**
  - Inhalation of dust or fumes may cause irritation to nose, throat, upper respiratory tract and lungs. Irritation may lead to bronchitis, headache, lowering of blood pressure and weakness.
- Chronic (Delayed)**
  - Repeated and prolonged exposure to dust may cause lung effects including pneumoconiosis.

**Skin**

- Acute (Immediate)**
  - May cause allergic reaction (sensitization) in susceptible individuals.
- Chronic (Delayed)**
  - No data available

**Eye**

- Acute (Immediate)**
  - Dust and fumes can irritate the eyes causing redness and discharge.
- Chronic (Delayed)**
  - No data available

**Ingestion**

- Acute (Immediate)**
  - Toxic if swallowed. Ingestion may cause severe headache, nausea, vomiting, abdominal pain, fatigue, diarrhea, trembling, ringing in ear and salivation.
- Chronic (Delayed)**
  - No data available

**Other**

- Chronic (Delayed)**
  - When the ammunition is fired, a small amount of particles may be generated. The particles may contain trace amounts of these harmful substances: Inhalation of high concentrations of metallic copper dusts or fumes may cause nasal irritation and/or nausea, vomiting and stomach pain. Chronic exposure to lead can cause kidney damage, anemia, reproductive effects, developmental effects and permanent nervous system damage in humans including changes in cognitive function.

**Carcinogenic Effects**

- Repeated and prolonged exposure may cause cancer.

<b>Carcinogenic Effects</b>			
	<b>CAS</b>	<b>IARC</b>	<b>NTP</b>
Arsenic	7440-38-2	Group 1-Carcinogenic	Known Human Carcinogen
Lead	7439-92-1	Group 2A-Probable Carcinogen	Reasonably Anticipated to be Human Carcinogen

**Reproductive Effects**

- Repeated and prolonged exposure may cause reproductive effects.

**11.2 Other information**

- Heating above the melting point releases metallic oxides which may cause metal fume fever by inhalation. The symptoms are shivering, fever, malaise and muscular pain. Exposure to antimony can cause what are known as antimony spots which is a rash characterized by papules and pustules that resembles chicken pox.

**Key to abbreviations**

LC = Lethal Concentration  
LD = Lethal Dose  
TD = Toxic Dose

## Section 12 - Ecological Information

### 12.1 Toxicity

	CAS	
Component Bullets (Centerfire & Muzzleload)	NDA	<p><b>Aquatic Toxicity-Fish:</b> 96 Hour(s) LC50 <i>Cyprinodon variegatus</i> (Sheepshead Minnow) 6.2 mg/L Comments: Antimony (7440-36-0)                      96 Hour(s) LC50 <i>Cyprinus carpio</i> (Common Carp) 0.4 mg/L Comments: Lead (7439-92-1)                      28 Day(s) NOEC <i>Cyprinus carpio</i> (Common Carp) 0.00003 mg/L Comments: Lead (7439-92-1)</p> <p><b>Aquatic Toxicity-Crustacea:</b> 28 Day(s) NOEC <i>Hyalella azteca</i> (Scud) 0.006 mg/L Comments: Lead (7439-92-1)</p> <p>7 Day(s) NOEC <i>Daphnia Magna</i> 3.9 mg/L Comments: Antimony (7440-36-0)</p> <p><b>Aquatic Toxicity-Algae and Other Aquatic Plant(s):</b> 72 Hour(s) EC50 <i>Chaetoceros sp.</i> (<i>Diatom</i>) 0.105 mg/L Comments: Lead (7439-92-1)</p>

- Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

- Material data lacking.

### 12.3 Bioaccumulative potential

- Material data lacking.

### 12.4 Mobility in Soil

- Material data lacking.

### 12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted for this material.

### 12.6 Other adverse effects

- No studies have been found.

## Section 13 - Disposal Considerations

### 13.1 Waste treatment methods

**Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

## Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

**14.6 Special precautions for user**

- None specified.

**14.7 Transport in bulk according to Annex II of**

- Data lacking.

**MARPOL 73/78 and the IBC Code**

**Section 15 - Regulatory Information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**SARA Hazard Classifications** • Acute, Chronic, Pressure(Sudden Release of)

State Right To Know				
Component	CAS	MA	NJ	PA
Antimony	7440-36-0	Yes	Yes	Yes
Arsenic	7440-38-2	Yes	Yes	Yes
Copper	7440-50-8	Yes	Yes	Yes
Lead	7439-92-1	Yes	Yes	Yes
Zinc	7440-66-6	Yes	Yes	Yes

Inventory				
Component	CAS	EU EINECS	EU ELNICS	TSCA
Antimony	7440-36-0	Yes	No	Yes
Arsenic	7440-38-2	Yes	No	Yes
Copper	7440-50-8	Yes	No	Yes
Lead	7439-92-1	Yes	No	Yes
Zinc	7440-66-6	Yes	No	Yes

**Europe**

**Other**

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	T; R23/25 N; R50-53
• Zinc	7440-66-6	Not Listed

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	T N R:23/25-50/53 S:(1/2)-20/21-28-45-60-61
• Zinc	7440-66-6	Not Listed

**EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	S:(1/2)-20/21-28-45-60-61
• Zinc	7440-66-6	Not Listed

## United States

### Labor

#### U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

#### U.S. - OSHA - Specifically Regulated Chemicals

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	30 µg/m <sup>3</sup> Action Level (See 29 CFR 1910.1025); 50 µg/m <sup>3</sup> TWA (See 29 CFR 1910.1025)
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

### Environment

#### U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

#### U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Copper	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm) 10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the
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• Lead	7439-92-1	solid metal released is >100 µm); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm) 5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Antimony	7440-36-0	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm) 1 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Arsenic	7440-38-2	1 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 0.454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm) 454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Zinc	7440-66-6	1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

**U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed

• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>U.S. - CERCLA/SARA - Section 313 - Emission Reporting</b>		
• Copper	7440-50-8	1.0 % de minimis concentration
• Lead	7439-92-1	0.1 % Supplier notification limit; 0.1 % de minimis concentration (when contained in stainless steel, brass, or bronze)
• Antimony	7440-36-0	1.0 % de minimis concentration
• Arsenic	7440-38-2	0.1 % de minimis concentration
• Zinc	7440-66-6	1.0 % de minimis concentration (dust or fume only)
<b>U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	100 lb RT (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy)
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - Basis for Listing - Appendix VII</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K069, K086, K100, K176
• Antimony	7440-36-0	Included in waste streams: F039, K021, K161, K177
• Arsenic	7440-38-2	Included in waste streams: F032, F034, F035, F039, K031, K060, K084, K101, K102, K161, K171, K172, K176
• Zinc	7440-66-6	Not Listed
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - Constituents for Detection Monitoring</b>		
• Copper	7440-50-8	(total)
• Lead	7439-92-1	(total)
• Antimony	7440-36-0	(total)
• Arsenic	7440-38-2	(total)
• Zinc	7440-66-6	(total)
<b>U.S. - RCRA (Resource Conservation &amp; Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Toxic Characteristic</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	5.0 mg/L regulatory level
• Antimony	7440-36-0	Not Listed

• Arsenic	7440-38-2	5.0 mg/L regulatory level
• Zinc	7440-66-6	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	hazardous constituent - no waste number
• Antimony	7440-36-0	hazardous constituent - no waste number
• Arsenic	7440-38-2	hazardous constituent - no waste number
• Zinc	7440-66-6	Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents**

• Copper	7440-50-8	(total)
• Lead	7439-92-1	(total)
• Antimony	7440-36-0	(total)
• Arsenic	7440-38-2	(total)
• Zinc	7440-66-6	(total)

**U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	0.69 mg/L (wastewater); 0.75 mg/L TCLP (nonwastewater)
• Antimony	7440-36-0	1.9 mg/L (wastewater); 1.15 mg/L TCLP (nonwastewater)
• Arsenic	7440-38-2	1.4 mg/L (wastewater); 5.0 mg/L TCLP (nonwastewater)
• Zinc	7440-66-6	2.61 mg/L (wastewater); 4.3 mg/L TCLP (nonwastewater)

**U.S. - RCRA (Resource Conservation & Recovery Act) - TSD Facilities Ground Water Monitoring**

• Copper	7440-50-8	(total)
• Lead	7439-92-1	(total)
• Antimony	7440-36-0	(total)
• Arsenic	7440-38-2	(total)
• Zinc	7440-66-6	(total)

**U.S. - RCRA (Resource Conservation & Recovery Act) - Waste Minimization Priority Chemicals**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

**United States - California**

**Environment**

**U.S. - California - Proposition 65 - Carcinogens List**

• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	carcinogen, initial date 10/1/92
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

**U.S. - California - Proposition 65 - Developmental Toxicity**



• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	developmental toxicity, initial date 2/27/87
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	0.5 µg/day MADL
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	15 µg/day NSRL (oral)
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	0.06 µg/day NSRL (inhalation); 10 µg/day NSRL (except inhalation)
• Zinc	7440-66-6	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	female reproductive toxicity, initial date 2/27/87
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed
<b>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	male reproductive toxicity, initial date 2/27/87
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

## United States - Pennsylvania

<b>Labor</b>		
<b>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</b>		
• Copper	7440-50-8	(dust and fume)
• Lead	7439-92-1	
• Antimony	7440-36-0	
• Arsenic	7440-38-2	(inorganic)
• Zinc	7440-66-6	
<b>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances</b>		
• Copper	7440-50-8	Not Listed
• Lead	7439-92-1	Not Listed
• Antimony	7440-36-0	Not Listed
• Arsenic	7440-38-2	Not Listed
• Zinc	7440-66-6	Not Listed

## 15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

## 15.3 Other Information

- WARNING: This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

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## Section 16 - Other Information

### Relevant Phrases (code & full text)

- H331 - Toxic if inhaled
- H351 - Suspected of causing cancer.
- H361d - Suspected of damaging the unborn child.
- H411 - Toxic to aquatic life with long lasting effects

### Revision Date

- 25/November/2015

### Preparation Date

- 10/August/2007

### Disclaimer/Statement of Liability

- The information contained in this Safety Data Sheet is provided to all individuals who are or will be exposed to this product through use, handling, storage or transport. Remington believes, yet makes no warranty, that all information contained in this document is current as of the date of publication.

### Key to abbreviations

NDA = No Data Available

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