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

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

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
### 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

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposures</th>
<th>ACGIH</th>
<th>Germany DFG</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (7440-50-8)</td>
<td>TWAs</td>
<td>0.2 mg/m3 TWA (fume)</td>
<td>Not established</td>
<td>1 mg/m3 TWA (dust and mist); 0.1 mg/m3 TWA (fume)</td>
<td>0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)</td>
</tr>
<tr>
<td></td>
<td>Ceilings</td>
<td>Not established</td>
<td>0.02 mg/m3 Peak (respirable fraction)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>MAKs</td>
<td>Not established</td>
<td>0.01 mg/m3 TWA MAK (including inorganic copper compounds, respirable fraction)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Antimony</td>
<td>TWAs</td>
<td>0.5 mg/m3 TWA</td>
<td>Not established</td>
<td>0.5 mg/m3 TWA</td>
<td>0.5 mg/m3 TWA</td>
</tr>
<tr>
<td>Arsenic (7440-38-2)</td>
<td>TWAs</td>
<td>0.01 mg/m3 TWA</td>
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<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>Ceilings</td>
<td>Not established</td>
<td>Not established</td>
<td>0.002 mg/m3 Ceiling (15 min)</td>
<td>Not established</td>
</tr>
<tr>
<td>Zinc (7440-66-6)</td>
<td>Ceilings</td>
<td>Not established</td>
<td>0.4 mg/m3 Peak (respirable fraction); 4 mg/m3 Peak (inhalable fraction)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>MAKs</td>
<td>Not established</td>
<td>0.1 mg/m3 TWA MAK (respirable fraction); 2 mg/m3 TWA MAK (inhalable fraction)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td>Lead</td>
<td>TWAs</td>
<td>0.05 mg/m3 TWA</td>
<td>Not established</td>
<td>0.050 mg/m3 TWA</td>
<td>50 µg/m3 TWA</td>
</tr>
</tbody>
</table>

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: \(30 \mu g/100 \text{ml Medium: blood Time: not critical Parameter: Lead}\) (Note: Women of child bearing potential, whose blood Pb exceeds 10 \(\mu g/dL\), are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 \(\mu g/dL\). 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: \(30 \mu g/100 \text{ml Medium: blood Time: not critical Parameter: Lead}\) (Note: Women of child bearing potential, whose blood Pb exceeds 10 \(\mu g/dL\), are at risk of delivering a child with a blood Pb over the current Centers for Disease Control guideline of 10 \(\mu g/dL\). 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: \(35 \mu g/100 \text{ml Medium: urine Time: end of workweek Parameter: Inorganic arsenic plus methylated metabolites (background)}\) | 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**

- 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.

- Wear safety glasses.

- 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.

- Hearing protection recommended when firing rounds.

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**Section 9 - Physical and Chemical Properties**

### 9.1 Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Brass, Copper and/or Gray solid with no odor.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Brass, Copper and/or Gray colors.</td>
<td>Odor</td>
<td>No odor.</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Data lacking</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>General Properties</th>
<th>Boiling Point</th>
<th>Melting Point/Freezing Point</th>
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<tbody>
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<td>Data lacking</td>
<td></td>
<td>Data lacking</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>93.3 C(199.94 F)</td>
<td>pH</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Specific Gravity/Relative Density</td>
<td>Data lacking</td>
<td>Density</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>
### Water Solubility
Negligible < 0.1 %

### Solvent Solubility
Data lacking

### Viscosity
Data lacking

### Explosive Properties
Data lacking

### Oxidizing Properties:
Data lacking

### Volatility

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

### Flammability

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>121 °C (249.8 °F)</td>
</tr>
<tr>
<td>LEL</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

### Explosive Properties
Data lacking

### Oxidizing Properties:
Data lacking

### Volatility

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

### Flammability

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>121 °C (249.8 °F)</td>
</tr>
<tr>
<td>LEL</td>
<td>Data lacking</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

### Environmental

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Octanol/Water Partition coefficient</td>
<td>Data lacking</td>
</tr>
</tbody>
</table>

### 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

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

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**Preparation Date:** 10/August/2007  
**Revision Date:** 25/November/2015  
**Format:** EU CLP/REACH Language: English (US)  
**EU CLP, OSHA HCS 2012**
STOT-RE
EU/CLP • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2
OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2

STOT-SE
EU/CLP • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation

Toxicity for Reproduction
EU/CLP • Toxic to Reproduction 1A
OSHA HCS 2012 • 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.

| Component Bullets (Centerfire & Muzzleload) | EU CLP, OSHA HCS 2012 |

<table>
<thead>
<tr>
<th>Carcinogenic Effects</th>
<th>CAS</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Group 1-Carcinogenic</td>
<td>Known Human Carcinogen</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Group 2A-Probable Carcinogen</td>
<td>Reasonably Anticipated to be Human Carcinogen</td>
</tr>
</tbody>
</table>

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

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

- 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

<table>
<thead>
<tr>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>NDA</td>
<td>Not Regulated</td>
<td>NDA</td>
<td>NDA</td>
</tr>
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<td>Not Regulated</td>
<td>NDA</td>
<td>NDA</td>
</tr>
<tr>
<td>IMO/IMDG</td>
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<td>NDA</td>
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<tr>
<td>IATA/ICAO</td>
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<td>Not Regulated</td>
<td>NDA</td>
<td>NDA</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user

- None specified.

14.7 Transport in bulk according to Annex II of

- Data lacking.
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)

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>MA</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>EU EINECS</th>
<th>EU ELNICS</th>
<th>TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification
- Copper
- Lead
- Antimony
- Arsenic
- Zinc

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits
- Copper
- Lead
- Antimony
- Arsenic
- Zinc

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling
- Copper
- Lead
- Antimony
- Arsenic
- Zinc

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

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases
- 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 Not Listed
- 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)
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Reportable Quantity</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>4.54 kg final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5000 lb final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>2270 kg final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 lb final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>0.454 kg final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>1000 lb final RQ</td>
<td>no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is &gt;100 µm</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Reportable Quantity</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Not Listed</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Reportable Quantity</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Not Listed</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Reportable Quantity</th>
<th>Reporting Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Not Listed</td>
<td></td>
</tr>
</tbody>
</table>
- Antimony 7440-36-0 Not Listed
- Arsenic 7440-38-2 Not Listed
- Zinc 7440-66-6 Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

- 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)

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

- 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

**U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII**

- Copper 7440-50-8 Not Listed
  Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K069, K086, K100, K176
- Lead 7439-92-1 Not Listed
  Included in waste streams: F039, K021, K161, K177
  Included in waste streams: F032, F034, F035, F039, K031, K060, K084, K101, K102, K161, K171, K172, K176
- Antimony 7440-36-0 Not Listed
- Arsenic 7440-38-2 Not Listed
- Zinc 7440-66-6 Not Listed

**U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection 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) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic**

- 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 hazardous constituent - no waste number
• 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 0.69 mg/L (wastewater); 0.75 mg/L TCLP (nonwastewater)
• Lead 7439-92-1 1.9 mg/L (wastewater); 1.15 mg/L TCLP (nonwastewater)
• Antimony 7440-36-0 1.4 mg/L (wastewater); 5.0 mg/L TCLP (nonwastewater)
• Arsenic 7440-38-2 2.61 mg/L (wastewater); 4.3 mg/L TCLP (nonwastewater)
• Zinc 7440-66-6 (total)

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 Not Listed
• 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 carcinogen, initial date 10/1/92
• 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. - California - Proposition 65 - Developmental Toxicity
<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>developmental toxicity, initial date 2/27/87</td>
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<tr>
<td>Antimony</td>
<td>7440-36-0</td>
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<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>0.5 µg/day MADL</td>
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<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>0.06 µg/day NSRL (inhalation); 10 µg/day NSRL (except inhalation)</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
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</tr>
</tbody>
</table>

**United States - Pennsylvania**

**Labor**

**U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List**

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>(dust and fume)</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td></td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>(inorganic)</td>
</tr>
<tr>
<td>Zinc</td>
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</tbody>
</table>

**U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances**

<table>
<thead>
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<th>Substance</th>
<th>CAS Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Lead</td>
<td>7439-92-1</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Antimony</td>
<td>7440-36-0</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>
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.

---

**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