# Rimfire Ammunition, Lead Free Bullet

Safety Data Sheet

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## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Explosive Article

**Product Name:** Copper 22™, TNT Green™, Green HP™, Lead-free bullet rimfire

**Synonyms:** None

### Intended Use of the Product

Small Arms Ammunition

### Name, Address, and Telephone of the Responsible Party

**Company**

Federal Cartridge Company (d/b/a CCI/Speer)
2299 Snake River Ave
Lewiston, ID 83501
T 1-800-635-7656
dangerous.goods@tkghunt.com

### Emergency Telephone Number

**Emergency number** : 1-800-424-9300 (Inside US), 01-703-527-3887 (Outside US) - (CHEMTREC, Day or Night)

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

**Classification (GHS-US)**

| | | |
|---|---|---|
| Physical Hazards: | Explosives | Division 1.4S |
| Health Hazards: | Acute Toxicity (inhalation) | Category 3 |
| | Carcinogenicity | Category 2 |
| | Reproductive Toxicity | Category 1A |
| | Specific Target Organ Toxicity, Repeat Exposure | Category 1 |
| | Specific Target Organ Toxicity, Repeat Exposure | Category 2 |

### Label Elements

**GHS-US Labeling**

**Hazard Pictograms (GHS-US)** :

**Signal Word (GHS-US)** : **DANGER**

**Hazard Statements (GHS-US)** : Fire or projection hazard. Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs (central nervous system, blood, kidney, reproductive system) through prolonged or repeated exposure.

**Precautionary Statements (GHS-US)**

Prevention:

Do not handle until all safety precautions have been read and understood. Keep away from heat. No smoking. Do not subject to shock. Wear eye protection. Do not breathe fumes. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response:

In case of fire: Evacuate area. Fight fire with normal precautions from a reasonable distance. If exposed, concerned or you feel unwell: Call a doctor or get medical attention.

Storage: Store in accordance with applicable fire codes. Keep only in original packaging.

Disposal: Dispose of ammunition in accordance with local regulations.

Supplemental information: The hazardous components of this product are encased and are not biologically available.

Therefore, some health hazards do not apply to the overall product. Decomposition

products, including lead, are released during the firing of cartridges. Use only outdoors or in a well-ventilated area.

### Other Hazards

**Other Hazards Not Contributing to the Classification**: Lead and barium are toxic metals that may be released during the firing of primers. Care should be taken in the cleaning of range facilities to minimize the exposure potential to lead and barium. Persons engaged in these activities should wear protective clothing with an appropriate respirator. Range operators should consult OSHA 1910.1025 for details pertaining to the handling of lead in the work environment. Severe lead intoxication has been associated in the past with sterility, spontaneous abortion, and stillbirth. Exposure to lead can aggravate pre-existing anemia, cardiovascular and respiratory diseases and conditions related to the gastrointestinal, reproductive, renal (kidney), and central nervous systems.

**Accidental Injury From Fired Cartridge:** Fired ammunition can create serious injury, possibly both entrance and exit wounds. To avoid serious injury, use ammunition only in good condition and originally chambered for a particular caliber. Always keep the barrel free of any obstruction. If the gun fails to fire, a delayed firing may occur, or the gun may fire upon being opened. Keep gun muzzle pointed in a safe direction. Wait 30 seconds. Avoid exposure to breech. Carefully unload. A fired bullet has an extremely long range and can cause serious injury or death. Always be sure of the backstop, and practice safe muzzle control at all times. Avoid firing at surfaces.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

| Name | Product identifier | % (w/w) |
|---|---|---|
| Copper | (CAS No) 7440-50-8 | 45 - 75 |
| Zinc | (CAS No) 7440-66-6 | 1 - 16 |
| Nitrocellulose | (CAS No) 9004-70-0 | 0.5 - 12 |
| Nitroglycerin | (CAS No) 55-63-0 | ≤ 7 |
| Zinc oxide | (CAS No) 1314-13-2 | < 0.25 |
| Graphite | (CAS No) 7782-42-5 | ≤ 0.25 |

*The hazardous components of this product are encased within a shell and are unlikely to be released under normal handling conditions. Therefore, the health and environmental hazards associated with nitrocellulose and nitroglycerin do not apply to the product overall.

**It is suspected that nickel causes cancer and damage to the respiratory tract via inhalation. Because this product is in massive form, it is unlikely that respiration is a potential route of exposure. Therefore, the hazards usually associated with nickel do not apply to this product.

More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary due to varying composition.

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur, go into open air and ventilate suspected area.

**Skin Contact:** Wash with plenty of soap and water. If skin irritation or rash occurs: Seek medical advice.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Ingestion:** Rinse mouth. Do NOT induce vomiting.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** May cause an allergic skin reaction. Projectiles from fired ammunition can cause puncture wounds.

**Inhalation:** Not expected to be a primary route of exposure.

**Skin Contact:** May cause an allergic skin reaction.

**Eye Contact:** None expected under normal conditions of use.

**Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Straight water stream; Water fog. Class A foam.
**Unsuitable Extinguishing Media:** None

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.
**Explosion Hazard:** Explosive. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package. Do not expose to heat, or ignition sources as this could cause an explosion. If heated above 200 °C (392 °F) may explode.
**Reactivity:** Hazardous reactions are unlikely to occur under normal circumstances.

### Advice for Firefighters

**Precautionary Measures Fire:** Do not breathe fumes from fires or vapors from decomposition. Exercise caution when fighting any chemical fire. If product is unconfined, there is a greater risk for injury from projectiles.
**Firefighting Instructions:** In case of fire: Evacuate area. Use water spray or fog for cooling exposed containers.
**Protection During Firefighting:** Self-contained breathing apparatus (SCBA) and full structural protective clothing should be worn for any fire or exposure to heat. This includes, but is not limited to, protective coat, pants, boots, firefighting gloves, SCBA with facepiece and helmet, protective hood and eye protection. (NFPA 1971)
**Hazardous Combustion Products**: Oxides of Barium, Lead, Antimony, Aluminum, Magnesium, Nitrogen, Carbon, and Sulfur.
**Specific Methods**:
Perform a risk assessment before engaging in offensive firefighting operations. Unless life safety risk or significant risk of property loss is present, consider taking defensive posture, protecting exposures and maintaining safe distance until material is consumed. For further information see the video “Ammunition and the Fire Fighter” by the Sporting Arms and Ammunition Manufacturers’ Institute (SAAMI).
Evacuate personnel to a safe area according to pre-determined public protection zones. Refer to pre-incident response and structural plans to determine potential for involvement of other hazardous materials. Direct water streams at product to reduce projectile hazard from exploding cartridges. After the fire is controlled, heated products can still re-ignite and project pieces of metal posing risk to fire-fighters. Full PPE including respiratory protection should be worn during salvage, overhaul and fire investigation. Do not disturb the involved area until the fire is completely extinguished and the product and packaging are allowed to cool down to ambient temperatures.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all unnecessary exposure.

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).
**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.
**Emergency Procedures:** Eliminate ignition sources.

### Environmental Precautions

Avoid release to the environment.

### Methods and Material for Containment and Cleaning Up

**For Containment:** Contain and collect as any solid. Use only non-sparking tools.
**Methods for Cleaning Up:** Clear up spills immediately and dispose of waste safely.

### Reference to Other Sections

See section 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**Additional Hazards When Processed:** Projectiles from fired ammunition can cause puncture wounds. Avoid striking the primer of unchambered cartridges. Remove ammunition from service if any of the following conditions have occurred: corrosion, physical damage, exposure to oil or spray type lubricants.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Do no eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

### Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Store as defined in the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR Part 555. Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep/Store away from heat sources, ignition sources, and incompatible materials. Keep container closed when not in use.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**Storage Area:** Keep only in original container.

**Specific End Use(s)** Small Arms Ammunition

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

| **Zinc oxide (1314-13-2)** | | |
|---|---|---|
| Mexico | OEL TWA (mg/m³) | 10 mg/m³ |
| Mexico | OEL STEL (mg/m³) | 10 mg/m³ |
| USA ACGIH | ACGIH TWA (mg/m³) | 2 mg/m³ |
| USA ACGIH | ACGIH STEL (mg/m³) | 10 mg/m³ |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 5 mg/m³ |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 5 mg/m³ |
| USA NIOSH | NIOSH REL (STEL) (mg/m³) | 10 mg/m³ |
| USA NIOSH | NIOSH REL (ceiling) (mg/m³) | 15 mg/m³ |
| USA IDLH | US IDLH (mg/m³) | 500 mg/m³ |
| Alberta | OEL STEL (mg/m³) | 10 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 2 mg/m³ |
| British Columbia | OEL STEL (mg/m³) | 10 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 2 mg/m³ |
| Manitoba | OEL STEL (mg/m³) | 10 mg/m³ |
| Manitoba | OEL TWA (mg/m³) | 2 mg/m³ |
| New Brunswick | OEL STEL (mg/m³) | 10 mg/m³ |
| New Brunswick | OEL TWA (mg/m³) | 5 mg/m³ |
| Newfoundland & Labrador | OEL STEL (mg/m³) | 10 mg/m³ |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 2 mg/m³ |
| Nova Scotia | OEL STEL (mg/m³) | 10 mg/m³ |
| Nova Scotia | OEL TWA (mg/m³) | 2 mg/m³ |
| Nunavut | OEL STEL (mg/m³) | 10 mg/m³ |
| Nunavut | OEL TWA (mg/m³) | 10 mg/m³ (total mass) |
| Northwest Territories | OEL STEL (mg/m³) | 10 mg/m³ |
| Northwest Territories | OEL TWA (mg/m³) | 10 mg/m³ (total mass) |
| Ontario | OEL STEL (mg/m³) | 10 mg/m³ |
| Ontario | OEL TWA (mg/m³) | 2 mg/m³ |
| Prince Edward Island | OEL STEL (mg/m³) | 10 mg/m³ |
| Prince Edward Island | OEL TWA (mg/m³) | 2 mg/m³ |
| Québec | VECD (mg/m³) | 10 mg/m³ |
| Québec | VEMP (mg/m³) | 5 mg/m³ |
| Saskatchewan | OEL STEL (mg/m³) | 10 mg/m³ |

| | | |
|---|---|---|
| Saskatchewan | OEL TWA (mg/m³) | 2 mg/m³ |
| Yukon | OEL STEL (mg/m³) | 20 mg/m³ |
| Yukon | OEL TWA (mg/m³) | 10 mg/m³ |
| **Lead (7439-92-1)** | | |
| Mexico | OEL TWA (mg/m³) | 0.15 mg/m³ |
| USA ACGIH | ACGIH TWA (mg/m³) | 0.05 mg/m³ |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 50 µg/m³ |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 0.050 mg/m³ |
| USA IDLH | US IDLH (mg/m³) | 100 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 0.05 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Manitoba | OEL TWA (mg/m³) | 0.05 mg/m³ |
| New Brunswick | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Nova Scotia | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Nunavut | OEL STEL (mg/m³) | 0.45 mg/m³ |
| Nunavut | OEL TWA (mg/m³) | 0.15 mg/m³ |
| Northwest Territories | OEL STEL (mg/m³) | 0.45 mg/m³ |
| Northwest Territories | OEL TWA (mg/m³) | 0.15 mg/m³ |
| Ontario | OEL TWA (mg/m³) | 0.05 mg/m³ (applies to workplaces to which the designated substances regulation does not apply) |
| Prince Edward Island | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Québec | VEMP (mg/m³) | 0.05 mg/m³ |
| Saskatchewan | OEL STEL (mg/m³) | 0.15 mg/m³ |
| Saskatchewan | OEL TWA (mg/m³) | 0.05 mg/m³ |
| Yukon | OEL STEL (mg/m³) | 0.45 mg/m³ |
| Yukon | OEL TWA (mg/m³) | 0.15 mg/m³ |
| **Copper (7440-50-8)** | | |
| Mexico | OEL TWA (mg/m³) | 1 mg/m³ |
| Mexico | OEL STEL (mg/m³) | 2 mg/m³ |
| USA ACGIH | ACGIH TWA (mg/m³) | 0.2 mg/m³ |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 1 mg/m³ |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 0.1 mg/m³ |
| USA IDLH | US IDLH (mg/m³) | 100 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 1 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 0.2 mg/m³ |
| Manitoba | OEL TWA (mg/m³) | 0.2 mg/m³ |
| New Brunswick | OEL TWA (mg/m³) | 1 mg/m³ |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 0.2 mg/m³ |
| Nova Scotia | OEL TWA (mg/m³) | 0.2 mg/m³ |
| Nunavut | OEL STEL (mg/m³) | 2 mg/m³ |
| Nunavut | OEL TWA (mg/m³) | 1 mg/m³ |
| Northwest Territories | OEL STEL (mg/m³) | 2 mg/m³ |
| Northwest Territories | OEL TWA (mg/m³) | 1 mg/m³ |
| Ontario | OEL TWA (mg/m³) | 1 mg/m³ |
| Prince Edward Island | OEL TWA (mg/m³) | 0.2 mg/m³ |
| Québec | VEMP (mg/m³) | 1 mg/m³ |
| Saskatchewan | OEL STEL (mg/m³) | 3 mg/m³ |
| Saskatchewan | OEL TWA (mg/m³) | 1 mg/m³ |
| Yukon | OEL STEL (mg/m³) | 2 mg/m³ |
| Yukon | OEL TWA (mg/m³) | 1 mg/m³ |

| **Nitroglycerin (55-63-0)** | | |
|---|---|---|
| Mexico | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Mexico | OEL TWA (ppm) | 0.05 ppm |
| Mexico | OEL STEL (mg/m³) | 1 mg/m³ |
| Mexico | OEL STEL (ppm) | 0.1 ppm |
| USA ACGIH | ACGIH TWA (ppm) | 0.05 ppm |
| USA OSHA | OSHA PEL (Ceiling) (mg/m³) | 2 mg/m³ |
| USA OSHA | OSHA PEL (Ceiling) (ppm) | 0.2 ppm |
| USA NIOSH | NIOSH REL (STEL) (mg/m³) | 0.1 mg/m³ |
| USA IDLH | US IDLH (mg/m³) | 75 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Alberta | OEL TWA (ppm) | 0.05 ppm |
| British Columbia | OEL TWA (ppm) | 0.05 ppm |
| Manitoba | OEL TWA (ppm) | 0.05 ppm |
| New Brunswick | OEL TWA (mg/m³) | 0.46 mg/m³ |
| New Brunswick | OEL TWA (ppm) | 0.05 ppm |
| Newfoundland & Labrador | OEL TWA (ppm) | 0.05 ppm |
| Nova Scotia | OEL TWA (ppm) | 0.05 ppm |
| Nunavut | OEL STEL (mg/m³) | 0.46 mg/m³ |
| Nunavut | OEL STEL (ppm) | 0.05 ppm |
| Nunavut | OEL TWA (mg/m³) | 1.9 mg/m³ |
| Nunavut | OEL TWA (ppm) | 0.02 ppm |
| Northwest Territories | OEL STEL (mg/m³) | 0.46 mg/m³ |
| Northwest Territories | OEL STEL (ppm) | 0.05 ppm |
| Northwest Territories | OEL TWA (mg/m³) | 1.9 mg/m³ |
| Northwest Territories | OEL TWA (ppm) | 0.02 ppm |
| Ontario | OEL TWA (ppm) | 0.05 ppm |
| Prince Edward Island | OEL TWA (ppm) | 0.05 ppm |
| Québec | PLAFOND (mg/m³) | 1.86 mg/m³ |
| Québec | PLAFOND (ppm) | 0.2 ppm |
| Saskatchewan | OEL STEL (ppm) | 0.15 ppm |
| Saskatchewan | OEL TWA (ppm) | 0.05 ppm |
| Yukon | OEL STEL (mg/m³) | 2 mg/m³ |
| Yukon | OEL STEL (ppm) | 0.2 ppm |
| Yukon | OEL TWA (mg/m³) | 2 mg/m³ |
| Yukon | OEL TWA (ppm) | 0.2 ppm |

| **Graphite (7782-42-5)** | | |
|---|---|---|
| Mexico | OEL TWA (mg/m³) | 2 mg/m³ (synthetic and natural) |
| USA ACGIH | ACGIH TWA (mg/m³) | 2 mg/m³ (all forms except graphite fibers) |
| USA OSHA | OSHA PEL (TWA) (mg/m³) | 5 mg/m³ (synthetic) |
| USA NIOSH | NIOSH REL (TWA) (mg/m³) | 2.5 mg/m³ (natural) |
| USA IDLH | US IDLH (mg/m³) | 1250 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibres) |
| British Columbia | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibres) |
| Manitoba | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers) |
| New Brunswick | OEL TWA (mg/m³) | 2 mg/m³ (all forms except graphite fibres) |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers) |
| Nova Scotia | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers) |
| Nunavut | OEL TWA (mg/m³) | 10 mg/m³ (synthetic, total mass) |
| Northwest Territories | OEL TWA (mg/m³) | 10 mg/m³ (synthetic, total mass) |
| Ontario | OEL TWA (mg/m³) | 2 mg/m³ (except Graphite fibres) |

| | | |
|---|---|---|
| Prince Edward Island | OEL TWA (mg/m³) | 2 mg/m³ (all forms except Graphite fibers) |
| Québec | VEMP (mg/m³) | 2 mg/m³ (containing no Asbestos and <1% Crystalline silica, except Graphite fibres) |
| Saskatchewan | OEL STEL (mg/m³) | 4 mg/m³ (natural, except Graphite fibres) |
| Saskatchewan | OEL TWA (mg/m³) | 2 mg/m³ (natural, except Graphite fibres) |
| Yukon | OEL TWA (mg/m³) | 10 mg/m³ (synthetic) |

| **Barium (7440-39-3)** | | |
|---|---|---|
| USA ACGIH | ACGIH TWA (mg/m³) | 0.5 mg/m³ |
| Alberta | OEL TWA (mg/m³) | 0.5 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Manitoba | OEL TWA (mg/m³) | 0.5 mg/m³ |
| New Brunswick | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Newfoundland & Labrador | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Nova Scotia | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Ontario | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Prince Edward Island | OEL TWA (mg/m³) | 0.5 mg/m³ |
| Saskatchewan | OEL STEL (mg/m³) | 1.5 mg/m³ |
| Saskatchewan | OEL TWA (mg/m³) | 0.5 mg/m³ |

### Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Safety glasses.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** In case of projectile hazard: Safety glasses. Face shield.

**Skin and Body Protection:** Wash contaminated clothing before reuse.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Other Information:** Do not eat, drink or smoke during use. If noise levels exceed OSHA limits while firing this product, use hearing protection in accordance with OSHA's Hearing Conservation Standard, 29 CFR 1910.95.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

| | | |
|---|---|---|
| **Physical State** | : | Solid |
| **Appearance** | : | Brass case with dull copper colored bullet. |
| **Odor** | : | Not available |
| **Odor Threshold** | : | Not available |
| **pH** | : | Not available |
| **Relative Evaporation Rate (butylacetate=1)** | : | Not available |
| **Melting Point** | : | Not available |
| **Freezing Point** | : | Not available |
| **Boiling Point** | : | Not available |
| **Flash Point** | : | Not available |
| **Auto-ignition Temperature** | : | Not available |
| **Decomposition Temperature** | : | Not available |
| **Flammability (solid, gas)** | : | Not available |

| | | |
|---|---|---|
| **Lower Flammable Limit** | : | Not available |
| **Upper Flammable Limit** | : | Not available |
| **Vapor Pressure** | : | Not available |
| **Relative Vapor Density at 20 °C** | : | Not available |
| **Relative Density** | : | Not available |
| **Specific Gravity** | : | 3.1 – 8.0 g/cm$^3$ |
| **Solubility** | : | Not available |
| **Partition coefficient: n-octanol/water** | : | Not available |
| **Viscosity** | : | Not available |
| **Explosive properties** | : | Explosive; fire or projection hazard |
| **Explosion Data – Sensitivity to Mechanical Impact** | : | Sensitive to mechanical impact |
| **Explosion Data – Sensitivity to Static Discharge** | : | Insensitive |

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Hazardous reactions are unlikely to occur under normal circumstances.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7). However, because of the design of ammunition and its components, partial detonation upon impact or intense heat may occur. Mass detonation will not occur.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

**Incompatible Materials:** Strong acids. Strong bases. Strong oxidizers.

**Hazardous Decomposition Products:** Metal oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:**

| **Rimfire Ammunition, Lead Free Bullet** | |
|---|---|
| ATE US (oral) | 100.00 mg/kg body weight |
| ATE US (dermal) | 300.00 mg/kg body weight |
| ATE US (dust, mist) | 0.50 mg/l/4h |

**Skin Corrosion/Irritation:** Not classified

**Serious Eye Damage/Irritation:** Not classified

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not classified

**Carcinogenicity:** Reasonably anticipated to be human carcinogen.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Not expected to be a primary route of exposure.

**Symptoms/Injuries After Skin Contact:** May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** None expected under normal conditions of use.

**Symptoms/Injuries After Ingestion:** Ingestion is likely to be harmful or have adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

| **Zinc oxide (1314-13-2)** | |
|---|---|
| LD50 Oral Rat | > 5000 mg/kg |
| ATE US (dust, mist) | 5.80 mg/l/4h |
| **Nitroglycerin (55-63-0)** | |
| LD50 Oral Rat | 105 mg/kg |
| LD50 Dermal Rabbit | > 280 mg/kg |

| | |
|---|---|
| ATE US (dust, mist) | 0.05 mg/l/4h |
| **Graphite (7782-42-5)** | |
| LD50 Oral Rat | > 2000 mg/kg |
| **Barium (7440-39-3)** | |
| LD50 Oral Rat | 132 mg/kg |
| **Lead (7439-92-1)** | |
| IARC Group | 2A |
| National Toxicity Program (NTP) Status | Reasonably anticipated to be Human Carcinogen. |

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not classified

| | |
|---|---|
| **Zinc oxide (1314-13-2)** | |
| LC50 Fish 1 | 780 µg/l Species: Pimephales promelas |
| NOEC chronic fish | 0.026 mg/l Species: Jordanella floridae |
| **Zinc (7440-66-6)** | |
| LC50 Fish 1 | 2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| EC50 Daphnia 1 | 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| LC 50 Fish 2 | 0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static]) |
| **Lead (7439-92-1)** | |
| LC50 Fish 1 | 0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static]) |
| EC50 Daphnia 1 | 600 µg/l (Exposure time: 48 h - Species: water flea) |
| LC 50 Fish 2 | 1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through]) |
| **Copper (7440-50-8)** | |
| LC50 Fish 1 | ≤ 0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas) |
| EC50 Daphnia 1 | 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| EC50 Other Aquatic Organisms 1 | 0.043 - 0.054 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static]) |
| LC 50 Fish 2 | 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 Other Aquatic Organisms 2 | 0.031 - 0.054 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static]) |
| **Nitroglycerin (55-63-0)** | |
| LC50 Fish 1 | 0.87 - 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through]) |
| EC50 Daphnia 1 | 46 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC 50 Fish 2 | 0.87 - 2.21 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static]) |
| EC50 Daphnia 2 | 38 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

**Persistence and Degradability**

| | |
|---|---|
| **Rimfire Ammunition, Lead Free Bullet** | |
| Persistence and Degradability | Not established. |
| **Copper (7440-50-8)** | |
| Persistence and Degradability | Not readily biodegradable. |

**Bioaccumulative Potential**

| | |
|---|---|
| **Rimfire Ammunition, Lead Free Bullet** | |
| Bioaccumulative Potential | Not established. |

**Mobility in Soil** Not available

**Other Adverse Effects**

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Ecology – Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

### In Accordance with DOT

**Proper Shipping Name** : CARTRIDGES, SMALL ARMS
**Hazard Class** : 1.4S
**Identification Number** : UN0012
**Label Codes** : 1.4S
**Packing Group** : None
**ERG Number** : 114

### Domestic Ground packaged per 49CFR173.63

**Proper Shipping Name** : None
**Hazard Class** : Limited Quantity
**Identification Number** : None
**Label Codes** : None
**Packing Group** : None

### In Accordance with IMDG

**Proper Shipping Name** : CARTRIDGES, SMALL ARMS
**Hazard Class** : 1.4S
**Identification Number** : UN0012
**Label Codes** : 1.4S
**EmS-No. (Fire)** : F-B
**EmS-No. (Spillage)** : S-X

### In Accordance with IATA

**Proper Shipping Name** : Check with air carrier for latest requirements.
**Identification Number** :
**Hazard Class** :
**Label Codes** :
**ERG Code (IATA)** :

### In Accordance with TDG

**Proper Shipping Name** : CARTRIDGES, SMALL ARMS
**Packing Group** : None
**Hazard Class** : 1.4S
**Identification Number** : UN0012
**Label Codes** : 1.4S

**Per 49CFR173.63(b):** *Limited quantities of Cartridges, small arms, Cartridges, power device, Cartridges for tools, blank, and Cases, cartridge, empty with primer.* (1)(i) Cartridges, small arms, Cartridges, power device (used to project fastening devices), Cartridges for tools, blank, and Cases, cartridge, empty with primer that have been classed as Division 1.4S explosive may be offered for transportation and transported as limited quantities when packaged in accordance with paragraph (b)(2) of this section. Packages containing such articles may be marked with either the marking prescribed in §172.315(a) or (b) of this subchapter and offered for transportation and transported by any mode. For transportation by aircraft, the package must conform to the applicable requirements of §173.27 of this part. In addition, packages containing such articles offered for transportation by aircraft must be marked with the proper shipping name as prescribed in the §172.101 Hazardous Materials Table of this subchapter. Packages containing such articles are not subject to the shipping paper requirements of subpart C of part 172 of this subchapter unless the material meets the definition of a hazardous substance, hazardous waste, marine pollutant, or is offered for transportation and transported by aircraft or vessel. Additionally, packages containing such articles are excepted from the requirements of subparts E (Labeling) and F (Placarding) of part 172 of this subchapter.

## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

| **Rimfire Ammunition, Lead Free Bullet** | |
|---|---|
| **SARA Section 311/312 Hazard Classes** | Immediate (acute) health hazard<br>Delayed (chronic) health hazard<br>Sudden release of pressure hazard |

| **Zinc oxide (1314-13-2)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

| **Zinc (7440-66-6)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on SARA Section 313 (Specific toxic chemical listings) | |
| **SARA Section 313 - Emission Reporting** | 1.0 % (dust or fume only) |

| **Nitrocellulose (9004-70-0)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

| **Lead (7439-92-1)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on SARA Section 313 (Specific toxic chemical listings) | |
| **SARA Section 313 - Emission Reporting** | 0.1 % |

| **Copper (7440-50-8)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on SARA Section 313 (Specific toxic chemical listings) | |
| **SARA Section 313 - Emission Reporting** | 1.0 % |

| **Nitroglycerin (55-63-0)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on SARA Section 313 (Specific toxic chemical listings) | |
| **SARA Section 313 - Emission Reporting** | 1.0 % |

| **Graphite (7782-42-5)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |

| **Barium (7440-39-3)** | |
|---|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on SARA Section 313 (Specific toxic chemical listings) | |
| **SARA Section 313 - Emission Reporting** | 1.0 % |

**US State Regulations**

| **Lead (7439-92-1)** | |
|---|---|
| **U.S. - California - Proposition 65 - Carcinogens List** | WARNING: This product contains chemicals known to the State of California to cause cancer. |
| **U.S. - California - Proposition 65 - Developmental Toxicity** | WARNING: This product contains chemicals known to the State of California to cause birth defects. |
| **U.S. - California - Proposition 65 - Reproductive Toxicity - Female** | WARNING: This product contains chemicals known to the State of California to cause (Female) reproductive harm. |
| **U.S. - California - Proposition 65 - Reproductive Toxicity - Male** | WARNING: This product contains chemicals known to the State of California to cause (Male) reproductive harm. |

| **Zinc oxide (1314-13-2)** |
|---|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Pennsylvania - RTK (Right to Know) List |

| **Zinc (7440-66-6)** |
|---|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Pennsylvania - RTK (Right to Know) List |

| **Nitrocellulose (9004-70-0)** |
|---|
| U.S. - Massachusetts - Right To Know List<br>U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) List |

| **Lead (7439-92-1)** |
|---|
| U.S. - Massachusetts - Right To Know List |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| U.S. - Pennsylvania - RTK (Right to Know) List |

| **Copper (7440-50-8)** |
|---|
| U.S. - Massachusetts - Right To Know List |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| U.S. - Pennsylvania - RTK (Right to Know) List |

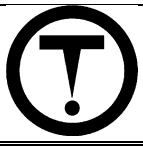
| **Nitroglycerin (55-63-0)** |
|---|
| U.S. - Massachusetts - Right To Know List |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| U.S. - Pennsylvania - RTK (Right to Know) List |

| **Graphite (7782-42-5)** |
|---|
| U.S. - Massachusetts - Right To Know List |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) List |

| **Barium (7440-39-3)** |
|---|
| U.S. - Massachusetts - Right To Know List |
| U.S. - New Jersey - Right to Know Hazardous Substance List |
| U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List |
| U.S. - Pennsylvania - RTK (Right to Know) List |

## Canadian Regulations

| **Rimfire Ammunition, Lead Free Bullet** | |
|---|---|
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects<br>Class F - Dangerously Reactive Material<br>**Note: Explosives are not regulated under WHMIS. They are subject to the regulations of the Explosives Act of Canada.** |



| **1,3-Benzenediol, 2,4,6-trinitro-, lead salt (15245-44-0)** |
|---|
| Listed on Non-Domestic Substances List (NDSL) |

| **Zinc oxide (1314-13-2)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory.<br>Listed on the Canadian Ingredient Disclosure List | |
| IDL Concentration 1 % | |
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

| **Zinc (7440-66-6)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Class B Division 6 - Reactive Flammable Material |

| **Nitrocellulose (9004-70-0)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Class B Division 4 - Flammable Solid<br>Class F - Dangerously Reactive Material |

| **Lead (7439-92-1)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory.<br>Listed on the Canadian Ingredient Disclosure List | |
| IDL Concentration 0.1 % | |
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |

| **Copper (7440-50-8)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory.<br>Listed on the Canadian Ingredient Disclosure List | |
| IDL Concentration 1 % | |
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

| **Nitroglycerin (55-63-0)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. |

| **Graphite (7782-42-5)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |

| **Barium (7440-39-3)** | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Class B Division 6 - Reactive Flammable Material<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Revision date** : 06/20/2024

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**Alt. product labeling** : This product may also additionally contain the following label provided in accordance with various State, Federal, and International regulations.

**WARNING:** Fire or projection hazard. Keep away from heat – no smoking. Do not subject to shock. Wear eye protection. Fight fire with normal precautions from a reasonable distance. Store and dispose of in accordance with local, national and international regulations.

**Party Responsible for the Preparation of This Document**


Federal Cartridge Company
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Anoka, MN 55303
1-800-635-7656
dangerous.goods@tkghunt.com


*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS US 2012 & WHMIS 2