

# Centerfire Rifle and Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Form:** Mixture

**Product Name:** Centerfire rifle and pistol ammunition (w/powdered copper core)

**Synonyms:** Federal Premium, Federal, P204D, P222D, {22250D, P22D, P223R, T556LOTM1, T556LOTM2, XMT556LOTM2C, XM855LFB, T762LOTM1

#### Intended Use of the Product

Small Arms Ammunition

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

##### **Company**

Federal Cartridge Company

900 Ehlen Drive

Anoka, MN 55303

T 1-800-635-7656

#### 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)**

Expl. 1.4S H204

Skin Sens. 1 H317

#### Label Elements

##### **GHS-US Labeling**

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

:



GHS07

##### **Signal Word (GHS-US)**

: Warning

##### **Hazard Statements (GHS-US)**

: H204 - Fire or projection hazard  
H317 - May cause an allergic skin reaction

##### **Precautionary Statements (GHS-US)**

: P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.  
P234 - Keep only in original packaging.  
P250 - Do not subject to friction, grinding, shock.  
P261 - Avoid breathing dust, fumes.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear face protection, protective gloves, protective clothing.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P321 - Specific treatment (see Section 4).  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P374 - Fight fire with normal precautions from a reasonable distance.  
P501 - Dispose of contents/container according to local, regional, national, and international regulations.

#### 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

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

the past with sterility, 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.

Natural rubber (Latex) is a known allergen. People with sensitivity to natural rubber should minimize exposure to this product.

**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)	Classification (GHS-US)
Lead	(CAS No) 7439-92-1	0 - 1	Not classified
Tin	(CAS No) 7440-31-5	0 – 5	Not classified
Copper	(CAS No) 7440-50-8	25 - 85	Not classified
Natural Rubber	(CAS No) 9006-04-6	<1	Skin Sens. 1, H317
Zinc	(CAS No) 7440-66-6	1 - 25	Not classified
Nitrocellulose*	(CAS No) 9004-70-0	4 - 15	Flam. Sol. 1, H228
Nitroglycerin*	(CAS No) 55-63-0	0 - 10	Unst. Expl, H200 Acute Tox. 2 (Oral), H300 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 STOT RE 2, H373 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Zinc oxide	(CAS No) 1314-13-2	< 0.25	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

\*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 some products 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.

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**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:** Fight fire with normal precautions from a reasonable distance.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### **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:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Oxides of Barium, Lead, Antimony, Aluminum, Magnesium, Nitrogen, Carbon, and Sulfur.

### **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 heading 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 not 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.

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**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

<b>Zinc oxide (1314-13-2)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Alberta	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> (total mass)
Ontario	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	VECD (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
<b>Lead (7439-92-1)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	50 µg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.050 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	0.45 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.45 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup> (applies to workplaces to which the designated substances regulation does not apply)
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	0.45 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	0.15 mg/m <sup>3</sup>
<b>Copper (7440-50-8)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Mexico	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
<b>Nitroglycerin (55-63-0)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Mexico	OEL TWA (ppm)	0.05 ppm
Mexico	OEL STEL (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Mexico	OEL STEL (ppm)	0.1 ppm
USA ACGIH	ACGIH TWA (ppm)	0.05 ppm
USA OSHA	OSHA PEL (Ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (Ceiling) (ppm)	0.2 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup>

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

USA IDLH	US IDLH (mg/m <sup>3</sup> )	75 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
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/m <sup>3</sup> )	0.46 mg/m <sup>3</sup>
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/m <sup>3</sup> )	0.46 mg/m <sup>3</sup>
Nunavut	OEL STEL (ppm)	0.05 ppm
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1.9 mg/m <sup>3</sup>
Nunavut	OEL TWA (ppm)	0.02 ppm
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	0.46 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (ppm)	0.05 ppm
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1.9 mg/m <sup>3</sup>
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/m <sup>3</sup> )	1.86 mg/m <sup>3</sup>
Québec	PLAFOND (ppm)	0.2 ppm
Saskatchewan	OEL STEL (ppm)	0.15 ppm
Saskatchewan	OEL TWA (ppm)	0.05 ppm
Yukon	OEL STEL (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL STEL (ppm)	0.2 ppm
Yukon	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL TWA (ppm)	0.2 ppm

### Barium (7440-39-3)

USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.5 mg/m <sup>3</sup>

### 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.

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**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 tin/copper 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 <sup>3</sup>
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:**

Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)	
ATE US (oral)	100.00 mg/kg body weight

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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:

<b>Zinc oxide (1314-13-2)</b>	
LD50 Oral Rat	> 5000 mg/kg
ATE US (dust, mist)	5.80 mg/l/4h

<b>Nitroglycerin (55-63-0)</b>	
LD50 Oral Rat	105 mg/kg
LD50 Dermal Rabbit	> 280 mg/kg
ATE US (dust, mist)	0.05 mg/l/4h

<b>Barium (7440-39-3)</b>	
LD50 Oral Rat	132 mg/kg

<b>Lead (7439-92-1)</b>	
IARC Group	2A
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen.

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not classified

<b>Zinc oxide (1314-13-2)</b>	
LC50 Fish 1	780 µg/l Species: Pimephales promelas
NOEC chronic fish	0.026 mg/l Species: Jordanella floridae

<b>Zinc (7440-66-6)</b>	
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])

<b>Lead (7439-92-1)</b>	
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])

<b>Copper (7440-50-8)</b>	
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])



# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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])
<b>Nitroglycerin (55-63-0)</b>	
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

<b>Small Arms Ammunition – Centerfire Rifle &amp; Pistol Ammunition (w/ powdered copper core)</b>	
Persistence and Degradability	Not established.

### Copper (7440-50-8)

Persistence and Degradability	Not readily biodegradable.
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### Bioaccumulative Potential

<b>Small Arms Ammunition – Centerfire Rifle &amp; Pistol Ammunition (w/ powdered copper core)</b>	
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

### 14.1 In Accordance with DOT

**Proper Shipping Name** : CARTRIDGES, SMALL ARMS  
**Hazard Class** : 1.4S  
**Identification Number** : UN0012  
**Label Codes** : 1.4S  
**Packing Group** : II  
**ERG Number** : 114



#### 14.1.1 Domestic Ground packaged per 49CFR173.63

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



### 14.2 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



### 14.3 In Accordance with IATA

**Proper Shipping Name** : CARTRIDGES, SMALL ARMS  
**Identification Number** : UN0012  
**Hazard Class** : 1  
**Label Codes** : 1.4S



# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

ERG Code (IATA) : 3L  
**14.4 In Accordance with TDG**  
 Proper Shipping Name : CARTRIDGES, SMALL ARMS  
 Packing Group : II  
 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

Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Sudden release of pressure hazard
<b>Zinc oxide (1314-13-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Zinc (7440-66-6)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 % (dust or fume only)
<b>Nitrocellulose (9004-70-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Lead (7439-92-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	0.1 %
<b>Copper (7440-50-8)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %
<b>Nitroglycerin (55-63-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 313 - Emission Reporting	1.0 %
<b>Barium (7440-39-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 313 - Emission Reporting</b>	1.0 %

### US State Regulations

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

<b>Zinc oxide (1314-13-2)</b>	
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	

<b>Zinc (7440-66-6)</b>	
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	

<b>Nitrocellulose (9004-70-0)</b>	
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	

<b>Lead (7439-92-1)</b>	
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	

<b>Copper (7440-50-8)</b>	
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	

<b>Nitroglycerin (55-63-0)</b>	
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	

<b>Barium (7440-39-3)</b>	
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

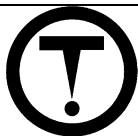
<b>Small Arms Ammunition – Centerfire Rifle &amp; Pistol Ammunition (w/ powdered copper core)</b>
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# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

WHMIS Classification	Class B Division 4 - Flammable Solid Class B Division 6 - Reactive Flammable Material Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class F - Dangerously Reactive Material <b>Note: Explosives are not regulated under WHMIS. They are subject to the regulations of the Explosives Act of Canada.</b>
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### Lead, dihydroxy[2,4,6-trinitro-1,3-benzenediolato(2-)]di- (12403-82-6)

Listed on Non-Domestic Substances List (NDSL)

### Zinc oxide (1314-13-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

IDL Concentration 1 %

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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### Zinc (7440-66-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 6 - Reactive Flammable Material
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### Nitrocellulose (9004-70-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 4 - Flammable Solid Class F - Dangerously Reactive Material
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### Lead (7439-92-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

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
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### Copper (7440-50-8)

Listed on the Canadian DSL (Domestic Substances List) inventory.

Listed on the Canadian Ingredient Disclosure List

IDL Concentration 1 %

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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### Nitroglycerin (55-63-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

### Barium (7440-39-3)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 6 - Reactive Flammable Material Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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### 1-Tetrazene-1-carboximidic acid, 4-(aminoiminomethyl)-, 2-nitrosohydrazide (109-27-3)

Listed on Non-Domestic Substances List (NDSL)

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 : 02/09/2015

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### Other Information

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

### GHS Full Text Phrases:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal) Category 2
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 2	Carcinogenicity Category 2
Comb. Dust	Combustible Dust
Expl. 1.1	Explosive Category 1.1
Expl. 1.4	Explosive Category 1.4
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Sol. 1	Flammable solids Category 1
Repr. 1A	Reproductive toxicity Category 1A
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
Unst. Expl	Unstable explosives
Water-react. 2	Substances and mixtures which in contact with water emit flammable gases Category 2
H200	Unstable explosives
H201	Explosive; mass explosion hazard
H204	Fire or projection hazard
H228	Flammable solid
Comb. Dust	May form combustible dust concentrations in air
H261	In contact with water releases flammable gases
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled

# Small Arms Ammunition – Centerfire Rifle & Pistol Ammunition (w/ powdered copper core)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

H332	Harmful if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing 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
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

### Party Responsible for the Preparation of This Document

Federal Cartridge Company  
900 Ehlen Drive  
Anoka, MN 55303  
1-800-635-7656

*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