

Safety Data Sheet



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

1.1 Product identifier

Product Name • **Centerfire Ammunition (Blank)**

Synonyms • Centerfire Revolver - Blank

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

Relevant identified use(s) • Military, Law Enforcement, Civilian training.

1.3 Details of the supplier of the safety data sheet

Manufacturer • Remington Arms
2592 AR HWY 15 N
Lonoke, AR 72086
United States
www.remington.com

Telephone (General) • 501-676-3161

1.4 Emergency telephone number

Manufacturer • (800) 424-9300 - CHEMTREC

Manufacturer • 501-676-3161 - Company Emergency Telephone Number

Section 2: Hazards Identification

EU/EEC

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

2.1 Classification of the substance or mixture

CLP • Explosives 1.4 - H204
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation - H335
Reproductive Toxicity 1A - H360Df

2.2 Label Elements

CLP

DANGER



Hazard statements • H204 - Fire or projection hazard
H335 - May cause respiratory irritation

H360Df - May damage the unborn child. Suspected of damaging fertility.
H370 - Causes damage to organs.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention** • P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
P240 - Ground and/or bond container and receiving equipment.
P250 - Do not subject to grinding/shock/friction.
P261 - Avoid breathing dust/fume.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear face protection .
P281 - Use personal protective equipment as required.
- Response** • P370+P380 - In case of fire: Evacuate area.
P374 - Fight fire with normal precautions from a reasonable distance.
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.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
- Storage/Disposal** • P401 - Store in accordance with local, regional, national, and/or international regulations.
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**
- 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. 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**
- Explosives 1.4
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Reproductive Toxicity 1A
Hazards Not Otherwise Classified - Health Hazards - Metal fume fever

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • Fire or projection hazard
May cause respiratory irritation
May damage fertility or the unborn child.

Precautionary statements

- Prevention** • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
Ground and/or bond container and receiving equipment.
Do not subject to grinding/shock/friction.
Avoid breathing dust/fume.

Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • In case of fire: Evacuate area.
Fight fire with normal precautions from a reasonable distance.
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 exposed or concerned: Get medical advice/attention.

- Storage/Disposal** • Store in accordance with local, regional, national, and/or international regulations.
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.

2.3 Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

3.1 Substances

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Copper	CAS:7440-50-8 EC Number:231-159-6	60% TO 65%	NDA	EU CLP: STOT SE 3: Resp. Irrit., H335; OSHA HCS 2012: Comb. Dust; STOT SE 3: Resp. Irrit.;	NDA
Zinc	CAS:7440-66-6 EC Number:231-175-3 EU Index:030-001-00-1	25% TO 30%	NDA	EU CLP: Not Classified OSHA HCS 2012: Comb. Dust; Hazards Not Otherwise Classified - Health Hazards - Metal fume fever	NDA
Nitroglycerin	CAS:55-63-0 EC Number:200-240-8	0.2% TO 1.5%	Ingestion/Oral-Rat LD50 • 105 mg/kg Skin-Rabbit LD50 • >280 mg/kg	EU CLP: Annex VI, Table 3.1: Expl. 1.1, H201.; Acute Tox. 2 *, H330; Acute Tox. 1, H310; Acute Tox. 2 *, H300; STOT RE 2 *, H373; Aquatic Chronic 2, H411; OSHA HCS 2012: Expl. 1.1; Acute Tox. 3, or; Eye Irrit. 2; Skin Sens. 1;	NDA
Guanyl nitrosaminoguanilyltetrazene	CAS:109-27-3 EINECS:203-659-4	0.1% TO 1.2%	NDA	EU CLP: Expl. 1.1, H201; OSHA HCS 2012: Expl. 1.1;	NDA
Nitrate cellulose	CAS:9004-70-0 EU Index:603-037-00-6 CAS:7440-39-	< 1%	Ingestion/Oral-Rat LD50 • >5 g/kg	EU CLP: Expl. 1.1, H201; OSHA HCS 2012: Expl. 1.1;	NDA

Barium	3 EINECS:231-149-1	< 1%	NDA	EU CLP: Not Classified OSHA HCS 2012: Comb. Dust	NDA
2,4,6-Trinitro-1,3-benzenediol lead salt	CAS:15245-44-0 EC Number:239-290-0	< 1%	NDA	EU CLP: Annex VI, Table 3.1: Expl. 1.1, H201; Repr. 1A, H306Df; Acute Tox. 4 *, H302; STOT RE 2 *, H373***; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 OSHA HCS 2012: Expl. 1.1; Repr. 1A; STOT RE 1 (Liver, Kidney, Blood, Nervous system)	NDA
Antimony	CAS:7440-36-0 EINECS:231-146-5	< 0.1%	Ingestion/Oral-Rat LD50 • 100 mg/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA

See Section 16 for full text of H-statements and R-phrases.

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

- May ignite if heated above 130°C.
Will ignite when exposed to flame and high temperatures.
Be cautious of low-energy fragments.
Packages bearing the 1.4S label or packages containing material classified as 1.4S are designed or packaged in such a manner that when involved in a fire, may burn vigorously with localized detonations and projection of fragments.
Effects are usually confined to immediate vicinity of packages.

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. If fire threatens cargo area containing packages bearing the 1.4S label or packages containing material classified as 1.4S, consider isolating at least 15 meters (50 feet) in all directions. In fire situations move people out of line of site of the scene and away from windows. Use normal clean up procedures.

6.2 Environmental precautions

- No special environmental precautions necessary.

6.3 Methods and material for containment and cleaning up

- Containment/Clean-up Measures**
- Use clean nonsparking tools to collect material. Carefully shovel or sweep up spilled material and place in suitable container.

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**
- Handle with care. Do not strike or crush the rounds. Avoid breathing dust or fume. Use personal protective equipment as required. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines						
	Result	ACGIH	Germany DFG	Germany TRGS	NIOSH	OSHA
Antimony	TWAs	0.5 mg/m ³ TWA	Not established	Not established	0.5 mg/m ³ TWA	0.5 mg/m ³ TWA
	Ceilings	Not established	0.01 ppm Peak; 0.094 mg/m ³ Peak	Not established	Not established	0.2 ppm Ceiling; 2 mg/m ³ Ceiling
				0.01 ppm TWA AGW		

Nitroglycerin (55-63-0)	TWAs	0.05 ppm TWA	Not established	(The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1); 0.094 mg/m ³ TWA AGW (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed, exposure factor 1)	Not established	Not established
	STELs	Not established	Not established	Not established	0.1 mg/m ³ STEL	Not established
	MAKs	Not established	0.01 ppm TWA MAK; 0.094 mg/m ³ TWA MAK	Not established	Not established	Not established
Barium (7440-39-3)	TWAs	0.5 mg/m ³ TWA	Not established	Not established	Not established	Not established
Zinc (7440-66-6)	Ceilings	Not established	0.4 mg/m ³ Peak (respirable fraction); 4 mg/m ³ Peak (inhalable fraction)	Not established	Not established	Not established
	MAKs	Not established	0.1 mg/m ³ TWA MAK (respirable fraction); 2 mg/m ³ TWA MAK (inhalable fraction)	Not established	Not established	Not established
Copper (7440-50-8)	TWAs	0.2 mg/m ³ TWA (fume)	Not established	Not established	1 mg/m ³ TWA (dust and mist); 0.1 mg/m ³ TWA (fume)	0.1 mg/m ³ TWA (fume); 1 mg/m ³ TWA (dust and mist)
	Ceilings	Not established	0.02 mg/m ³ Peak (respirable fraction)	Not established	Not established	Not established
	MAKs	Not established	0.01 mg/m ³ TWA MAK (including inorganic copper compounds, respirable fraction)	Not established	Not established	Not established

Exposure Control Notations

Germany TRGS

- Nitroglycerin (55-63-0): **Skin:** (skin notation)

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))
- Antimony (7440-36-0): **Carcinogens:** (Category 2 (considered to be carcinogenic for man))
- Nitroglycerin (55-63-0): **Carcinogens:** (Category 3B (could be carcinogenic for man)) | **Pregnancy:** (no risk to embryo/fetus if exposure limits adhered to) | **Skin:** (skin notation)

8.2 Exposure controls

Engineering Measures/Controls

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

level.

Personal Protective Equipment**Respiratory**

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

Eye/Face

- Wear safety glasses.

Skin/Body

- Wear protective clothing

Environmental Exposure Controls

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

Additional Protection Measures

- Hearing protection recommended when firing rounds.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

MAK = Maximale Arbeitsplatz Konzentration is the maximum permissible concentration

STEL = Short Term Exposure Limits are based on 15-minute exposures

NIOSH = National Institute of Occupational Safety and Health

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

Section 9 - Physical and Chemical Properties**9.1 Information on Physical and Chemical Properties**

Material Description			
Physical Form	Solid	Appearance/Description	Brass, Copper, and/or Silver/Gray solid with no odor.
Color	Brass, Copper, and/or Silver/Gray.	Odor	No odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	Data lacking
Decomposition Temperature	93.3 °C(199.94 °F)	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Negligible < 0.1 %
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	130 °C(266 °F)	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity**10.1 Reactivity**

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

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

10.5 Incompatible materials

- Acids, strong oxidizers, caustics

10.6 Hazardous decomposition products

- No data available.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

		Components
Copper (60% TO 65%)	7440-50-8	<p>Acute Toxicity: Ingestion/Oral-Mouse LD50 • 413 mg/kg; Ingestion/Oral-Mouse TDLo • 108 mg/kg; <i>Behavioral:Tremor; Gastrointestinal:Hypermotility, diarrhea; Gastrointestinal:Nausea or vomiting;</i> Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis);</i> Ingestion/Oral-Mouse TDLo • 232 mg/kg; <i>Kidney, Ureter, and Bladder:Changes primarily in glomeruli; Blood:Changes in spleen; Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol);</i> Multiple-Non-Mammalian LC50 • 238 mg/m³ 24 Hour(s);</p> <p>Multi-dose Toxicity: Ingestion/Oral-Rabbit TDLo • 3 g/kg 60 Day(s)-Continuous; <i>Cardiac:Other changes; Liver:Hepatitis (hepatocellular necrosis), zonal; Related to Chronic Data:Death in the Other Multiple Dose data type field;</i></p> <p>Reproductive: Ingestion/Oral-Rat TDLo • 1520 µg/kg (22W pre); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Ingestion/Oral-Rat TDLo • 152 mg/kg (22W pre); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Central nervous system;</i> Ingestion/Oral-Rat TDLo • 1210 µg/kg (35W pre); <i>Reproductive Effects:Effects on Fertility:Pre-implantation mortality; Reproductive Effects:Effects on Fertility:Post-implantation mortality;</i></p> <p>Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 10.08 mg/kg 12 Week(s)-Continuous; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Other changes</i></p>
Zinc (25% TO 30%)	7440-66-6	<p>Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation;</p> <p>Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 12.6 mg/kg 46 Week(s)-Continuous; <i>Tumorigenic:Carcinogenic by RTECS criteria; Gastrointestinal:Tumors; Tumorigenic:Facilitates action of known carcinogen</i></p>
Barium (< 1%)	7440-39-3	<p>Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 26622 mg/kg 69 Week(s)-Continuous; <i>Vascular:BP elevation not characterized in autonomic section; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Cytochrome oxidases (including oxidative phosphorylation); Biochemical:Metabolism (intermediary):Xanthine, purine, or nucleotides including urate</i></p>
Nitroglycerin (0.2% TO 1.5%)	55-63-0	<p>Acute Toxicity: Ingestion/Oral-Mammal LD50 • 105 mg/kg; Ingestion/Oral-Rat LD50 • 105 mg/kg; <i>Behavioral:Somnolence (general depressed activity);</i> Ingestion/Oral-Woman TDLo • 5 mg/kg; <i>Behavioral:General anesthetic; Cardiac:Other changes; Kidney, Ureter, and Bladder:Incontinence;</i> Skin-Rabbit LD50 • >280 mg/kg;</p> <p>Irritation: Skin-Rabbit • 500 mg 24 Hour(s) • Mild irritation;</p> <p>Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 4080 mg/kg 30 Day(s)-Intermittent; <i>Cardiac:EKG changes not diagnostic of above; Cardiac:Pulse rate increase without fall in BP; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Multiple enzyme effects;</i> Skin-Rat TDLo • 1500 mg/kg 30 Day(s)-Intermittent; <i>Blood:Pigmented or nucleated red blood cells; Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol); Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Transaminases;</i></p> <p>Reproductive: Skin-Rat TDLo • 3640 mg/kg (17-21D preg/21D post); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Effects on Newborn:Viability index</i></p>

		(e.g., # alive at day 4 per # born alive); Tumorigen / Carcinogen: Ingestion/Oral-Rat TDLo • 240170 mg/kg 2 Year(s)-Intermittent; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria; Liver:Tumors; Tumorigenic:Increased incidence of tumors in susceptible strains</i>
Nitrate cellulose (< 1%)	9004-70-0	Acute Toxicity: Ingestion/Oral-Rat LD50 • >5 g/kg

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Toxic to Reproduction 1A OSHA HCS 2012 • Toxic to Reproduction 1A
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
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

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)

- No data available

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)

- Ingestion is not anticipated to be a likely route of exposure to this product.

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.

Reproductive Effects

- Repeated and prolonged exposure may cause reproductive effects.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TD = Toxic Dose

Section 12 - Ecological Information**12.1 Toxicity**

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods****Product waste**

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

Packaging waste

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

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN0014	Cartridges, Small Arms, Blank	1.4S	II	NDA
TDG	UN0014	CARTRIDGES, SMALL ARMS, BLANK	1.4S	II	NDA

IMO/IMDG	UN0014	CARTRIDGES, SMALL ARMS, BLANK	1.4S	NDA	NDA
IATA/ICAO	UN0014	Cartridges, small arms, blank	1.4S	NDA	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • 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)

State Right To Know				
Component	CAS	MA	NJ	PA
2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Yes	Yes	No
Antimony	7440-36-0	Yes	Yes	Yes
Barium	7440-39-3	Yes	Yes	Yes
Copper	7440-50-8	Yes	Yes	Yes
Guanyl nitrosaminoguanyltetrazene	109-27-3	No	No	No
Nitrate cellulose	9004-70-0	Yes	Yes	Yes
Nitroglycerin	55-63-0	Yes	Yes	Yes
Zinc	7440-66-6	Yes	Yes	Yes

Inventory				
Component	CAS	EU EINECS	EU ELNICS	TSCA
2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Yes	No	Yes
Antimony	7440-36-0	Yes	No	Yes
Barium	7440-39-3	Yes	No	Yes
Copper	7440-50-8	Yes	No	Yes
Guanyl nitrosaminoguanyltetrazene	109-27-3	Yes	No	Yes
Nitrate cellulose	9004-70-0	No	No	Yes
Nitroglycerin	55-63-0	Yes	No	Yes
Zinc	7440-66-6	Yes	No	Yes

Europe

Other

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

• Nitroglycerin	55-63-0	T+; R26/27/28 E; R3 R33 N; R51-53
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Xn; R20/22 E; R3 R33 N; R50-53 Repr.Cat.1; R61 Repr.Cat.3;

		R62
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	E; R3

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	E T+ N R:3-26/27/28-33-51/53 S:(1/2)-33-35-36/37-45-61
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	E T N R:61-3-20/22-33-50/53- 62 S:53-45-60-61
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	E R:3 S:(2)-35

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	E, 1
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	T

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

• Nitroglycerin	55-63-0	S:(1/2)-33-35-36/37-45-61
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	S:53-45-60-61
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	S:(2)-35

United States**Labor****U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

• Nitroglycerin	55-63-0	Not Listed
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• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	2500 lb TQ (concentration >12.6% Nitrogen)

U.S. - OSHA - Specifically Regulated Chemicals

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	10 lb final RQ; 4.54 kg final RQ
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• 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)
• Antimony	7440-36-0	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)

• Zinc	7440-66-6	454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 1000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Nitroglycerin	55-63-0	1.0 % de minimis concentration
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	1.0 % de minimis concentration
• Copper	7440-50-8	1.0 % de minimis concentration
• Antimony	7440-36-0	1.0 % de minimis concentration
• Zinc	7440-66-6	1.0 % de minimis concentration (dust or fume)

• Nitrate cellulose	9004-70-0	only) Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Included in waste stream: F039
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Included in waste streams: F039, K021, K161, K177
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Antimony	7440-36-0	(total)
• Zinc	7440-66-6	(total)
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic		
• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	100.0 mg/L regulatory level
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261		
• Nitroglycerin	55-63-0	waste number P081
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	hazardous constituent - no waste number
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	hazardous constituent - no waste number
• Zinc	7440-66-6	Not Listed

• Nitrate cellulose	9004-70-0	Not Listed
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U.S. - RCRA (Resource Conservation & Recovery Act) - List for Hazardous Constituents

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Antimony	7440-36-0	(total)
• Zinc	7440-66-6	(total)
• Nitrate cellulose	9004-70-0	Not Listed

U.S. - RCRA (Resource Conservation & Recovery Act) - P Series Wastes - Acutely Toxic Wastes

• Nitroglycerin	55-63-0	waste number P081 (Reactive waste)
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	1.2 mg/L (wastewater); 21 mg/L TCLP (nonwastewater)
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	1.9 mg/L (wastewater); 1.15 mg/L TCLP (nonwastewater)
• Zinc	7440-66-6	2.61 mg/L (wastewater); 4.3 mg/L TCLP (nonwastewater)
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Antimony	7440-36-0	(total)
• Zinc	7440-66-6	(total)
• Nitrate cellulose	9004-70-0	Not Listed

United States - California**Environment****U.S. - California - Proposition 65 - Carcinogens List**

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed

• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

United States - Pennsylvania

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

• Nitroglycerin	55-63-0	
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	
• Copper	7440-50-8	(dust and fume)
• Antimony	7440-36-0	
• Zinc	7440-66-6	
• Nitrate cellulose	9004-70-0	Not Listed

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

• Nitroglycerin	55-63-0	Not Listed
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Guanyl nitrosaminoguanilyltetrazene	109-27-3	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Antimony	7440-36-0	Not Listed
• Zinc	7440-66-6	Not Listed
• Nitrate cellulose	9004-70-0	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information**Relevant Phrases (code & full text)**

- H201 - Explosive; mass explosion hazard
- H300 - Fatal if swallowed
- H302 - Harmful if swallowed
- H310 - Fatal in contact with skin
- H330 - Fatal if inhaled
- 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
- H411 - Toxic to aquatic life with long lasting effects

Revision Date

- No data available

Preparation Date

- 25/October/2010

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