

Safety Data Sheet



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

1.1 Product identifier

- Product Name** • **Component Empty Shellcases (Primed) (Shotshell)**
Synonyms • Shotshell Empty Primed Shells
SDS Number/Grade • SSPRCASE

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

- Relevant identified use(s)** • Handloading/Reloading

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.

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 protective gloves/protective clothing/eye protection/face protection.
P281 - Use personal protective equipment as required.

- Response** • P370+P380 - In case of fire: Evacuate area.
P372 - Explosion risk in case of fire.
P373 - DO NOT fight fire when fire reaches explosives.
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
Skin Sensitization 1A
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 an allergic skin reaction
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.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.

- Response •** In case of fire: Evacuate area.
 Explosion risk in case of fire.
 DO NOT fight fire when fire reaches explosives.
 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 on skin: Wash with plenty of water .
 Specific treatment, see supplemental first aid information.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 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

- 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. 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 in accordance with Regulation (EC) No 1272/2008.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Iron oxide	CAS:1309-37-1 EC Number:215-168-2	5% TO 25%	NDA	EU CLP: Not Classified OSHA HCS 2012: Not Classified	NDA
Copper	CAS:7440-50-8 EC Number:231-159-6	0.2% TO 2%	NDA	EU CLP: STOT SE 3: Resp. Irrit., H335 OSHA HCS 2012: Comb. Dust; STOT SE 3: Resp. Irrit.	NDA
Barium	CAS:7440-39-3 UN:UN1400	0.2% TO 0.8%	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	0.2% TO 0.8%	NDA	EU CLP: Expl. 1.1., H201; Repr. 1A, H360Df; 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

Zinc	CAS:7440-66-6 EC Number:231-175-3 EU Index:030-001-00-1	0.1% TO 0.6%	NDA	EU CLP: Not Classified OSHA HCS 2012: Comb. Dust; HNO3 Health: Metal fume fever	NDA
Nickel	CAS:7440-02-0 EC Number:231-111-4	< 0.5%	NDA	EU CLP: Annex VI, Table 3.1: Carc. 2, H351; STOT RE 1, H372; Skin Sens. 1, H317; Aquatic Chronic 3, H412 OSHA HCS 2012: Flam. Sol. 1; Comb. Dust; Resp. Sens. 1B; Skin Sens. 1A; Carc. 2 (Inhalation); STOT RE 2 (Lungs / Oral, Inhalation)	NDA

See Section 16 for full text of H-statements.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

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

Skin

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

Eye

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

Ingestion

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

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

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

Section 5 - Firefighting Measures

5.1 Extinguishing media

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

Unsuitable Extinguishing Media • No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- 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	NIOSH	OSHA
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
	MAKs	Not established	0.1 mg/m ³ TWA MAK (respirable fraction); 2 mg/m ³ TWA MAK	Not established	Not established

			(inhalable fraction)		
Copper (7440-50-8)	TWAs	0.2 mg/m3 TWA (fume)	Not established	1 mg/m3 TWA (dust and mist); 0.1 mg/m3 TWA (fume)	0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)
	Ceilings	Not established	0.02 mg/m3 Peak (respirable fraction)	Not established	Not established
	MAKs	Not established	0.01 mg/m3 TWA MAK (including inorganic copper compounds, respirable fraction)	Not established	Not established
Barium (7440-39-3)	TWAs	0.5 mg/m3 TWA	Not established	Not established	Not established
2,4,6-Trinitro-1,3-benzenediol lead salt	TWAs	Not established	Not established	0.050 mg/m3 TWA (as Pb) <i>as Lead compounds</i>	Not established
Nickel (7440-02-0)	TWAs	1.5 mg/m3 TWA (inhalable fraction)	Not established	0.015 mg/m3 TWA	1 mg/m3 TWA
Iron oxide (1309-37-1)	TWAs	5 mg/m3 TWA (respirable fraction)	Not established	5 mg/m3 TWA (dust and fume, as Fe)	10 mg/m3 TWA (fume); 15 mg/m3 TWA (total dust, listed under Rouge); 5 mg/m3 TWA (respirable fraction, listed under Rouge)

Exposure Control Notations

ACGIH

- Nickel (7440-02-0): **Carcinogens:** (A5 - Not Suspected as a Human Carcinogen)
- Iron oxide (1309-37-1): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)
- Barium (7440-39-3): **Carcinogens:** (A4 - Not Classifiable as a Human Carcinogen)

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))
- Nickel (7440-02-0): **Carcinogens:** (Category 1 (causes cancer in man)) | **Sensitizers:** (respiratory and skin sensitizer (inhalable fraction, respiratory sensitization confirmed for water soluble Nickel compounds only))
- Nickel as Nickel compounds: **Carcinogens:** (Category 1 (causes cancer in man)) | **Sensitizers:** (respiratory and skin sensitizer (inhalable fraction, respiratory sensitization confirmed for water soluble Nickel compounds only))
- Iron oxide (1309-37-1): **Carcinogens:** (Category 3B (could be carcinogenic for man, with the exception of non-bioavailable ferrous oxides))

Exposure Limits Supplemental

ACGIH

- Copper (7440-50-8): **TLV Basis - Critical Effects:** (metal fume fever (fume))
- Copper as Copper compounds: **TLV Basis - Critical Effects:** (gastrointestinal (dust and mist); irritation (dust and mist))
- Nickel (7440-02-0): **TLV Basis - Critical Effects:** (dermatitis; pneumoconiosis)
- Iron oxide (1309-37-1): **TLV Basis - Critical Effects:** (pneumoconiosis)
- Barium (7440-39-3): **TLV Basis - Critical Effects:** (eye, gastrointestinal and skin irritation; muscular stimulation)

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

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

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	Various colored solid with no odor.
Color	Various	Odor	No odor.
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	100 to 400 °C(212 to 752 °F)
Decomposition Temperature	93.3 °C(199.94 °F)	pH	Data lacking
Specific Gravity/Relative Density	Data lacking	Water Solubility	Negligible < 0.1 %
Solvent Solubility	Data lacking	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	121 °C(249.8 °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 (0.2% TO 2%)	7440- 50-8	Acute Toxicity: Ingestion/Oral-Mouse TDLo • 108 mg/kg; <i>Behavioral:Tremor</i> ; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; <i>Gastrointestinal:Nausea or vomiting</i> ; Ingestion/Oral-Mouse TDLo • 158 mg/kg; <i>Kidney, Ureter, and Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis)</i> ; Ingestion/Oral-Mouse TDLo • 232 mg/kg; <i>Kidney, Ureter, and Bladder:Changes primarily in glomeruli</i> ; <i>Blood:Changes in spleen</i> ; <i>Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol)</i> ; Multi-dose Toxicity: Ingestion/Oral-Rabbit TDLo • 3 g/kg 60 Day(s)-Continuous; <i>Cardiac:Other changes</i> ; <i>Liver:Hepatitis (hepatocellular necrosis), zonal</i> ; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i> ; Reproductive: Ingestion/Oral-Rat TDLo • 152 mg/kg (22W pre); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Specific Developmental Abnormalities:Central nervous system</i> ; Ingestion/Oral-Rat TDLo • 1520 µg/kg (22W pre); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system</i> ; Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 10.08 mg/kg 12 Week(s)-Continuous; <i>Tumorigenic:Carcinogenic by RTECS criteria</i> ; <i>Lungs, Thorax, or Respiration:Other changes</i>
Zinc (0.1% TO 0.6%)	7440- 66-6	Irritation: Skin-Human • 300 µg 3 Day(s)-Intermittent • Mild irritation; Tumorigen / Carcinogen: Ingestion/Oral-Mouse TDLo • 12.6 mg/kg 46 Week(s)-Continuous; <i>Tumorigenic:Carcinogenic by RTECS criteria</i> ; <i>Gastrointestinal:Tumors</i> ; <i>Tumorigenic:Facilitates action of known carcinogen</i>
Nickel (< 0.5%)	7440- 02-0	Acute Toxicity: Ingestion/Oral-Mouse LDLo • 500 mg/kg; <i>Gastrointestinal:Other changes</i> ; Ingestion/Oral-Rat TDLo • 200 mg/kg; <i>Nutritional and Gross Metabolic:Gross Metabolite Changes:Weight loss or decreased weight gain</i> ; <i>Behavioral:Somnolence (general depressed activity)</i> ; Multi-dose Toxicity: Inhalation-Rabbit TCLo • 1 mg/m ³ 6 Hour(s) 13 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes</i> ; <i>Lungs, Thorax, or Respiration:Changes in lung weight</i> ; <i>Blood:Hemorrhage</i> ; Inhalation-Rat TCLo • 0.4 mg/m ³ 40 Week(s)-Intermittent; <i>Vascular:Thrombosis distant from injection site</i> ; <i>Lungs, Thorax, or Respiration:Other changes</i> ; <i>Related to Chronic Data:Death in the Other Multiple Dose data type field</i> ; Reproductive: Ingestion/Oral-Rat TDLo • 158 mg/kg (multigenerations); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus)</i> ; <i>Reproductive Effects:Effects on Embryo or Fetus:Fetal death</i> ; Tumorigen / Carcinogen: Inhalation-Guinea Pig TCLo • 15 mg/m ³ 91 Week(s)-Intermittent; <i>Tumorigenic:Equivocal tumorigenic agent by RTECS criteria</i> ; <i>Lungs, Thorax, or Respiration:Tumors</i> ; <i>Lungs, Thorax, or Respiration:Bronchiogenic carcinoma</i>
Iron oxide (5% TO 25%)	1309- 37-1	Acute Toxicity: Inhalation-Rat TCLo • 50 mg/m ³ 12 Hour(s); <i>Behavioral:Excitement</i> ; <i>Behavioral:Fluid intake</i> ; <i>Gastrointestinal:Hypermotility, diarrhea</i> ; Inhalation-Rat TCLo • 0.8 mg/kg; <i>Lungs, Thorax, or Respiration:Emphysema</i> ; <i>Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Multiple enzyme effects</i> ; <i>Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation</i> ; Multi-dose Toxicity: Inhalation-Rat TCLo • 500 µg/m ³ 24 Hour(s) 61 Day(s)-Continuous; <i>Brain and Coverings:Other degenerative changes</i> ; <i>Blood:Changes in serum composition (e.g., TP, bilirubin cholesterol)</i> ; <i>Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:True cholinesterase</i>
Barium (0.2% TO 0.8%)	7440- 39-3	Multi-dose Toxicity: Ingestion/Oral-Rat TDLo • 26622 mg/kg 69 Week(s)-Continuous; <i>Vascular:BP elevation not characterized in autonomic section</i> ; <i>Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Cytochrome oxidases (including oxidative phosphorylation)</i> ; <i>Biochemical:Metabolism (intermediary):Xanthine, purine, or nucleotides including urate</i>

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 • Skin Sensitizer 1A
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 skin sensitization. Symptoms include redness, and skin rash.

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.

Carcinogenic Effects

- This product is not classified a carcinogen by IARC, OSHA, NTP or EPA. However,

there are some components that are carcinogens according to these agencies.

Carcinogenic Effects			
	CAS	IARC	NTP
2,4,6-Trinitro-1,3-benzenediol lead salt as Lead Compounds	NDA	Not Listed	Reasonably Anticipated to be Human Carcinogen
Nickel	7440-02-0	Group 2B-Possible Carcinogen	Reasonably Anticipated to be Human Carcinogen

Reproductive Effects

- Repeated and prolonged exposure may cause reproductive effects.

Key to abbreviations

LD = Lethal Dose
 TC = Toxic Concentration
 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	UN0055	Cases, cartridge, empty with primer	1.4S	II	NDA
TDG	UN0055	CASES, CARTRIDGE, EMPTY WITH PRIMER	1.4S	II	NDA

IMO/IMDG	UN0055	CASES, CARTRIDGE, EMPTY WITH PRIMER	1.4S	NDA	NDA
IATA/ICAO	UN0055	Cases, cartridge, empty with primer	1.4S	NDA	NDA

14.6 Special precautions for user • None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Not relevant.

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
Barium	7440-39-3	Yes	Yes	Yes
Copper	7440-50-8	Yes	Yes	Yes
Iron oxide	1309-37-1	Yes	Yes	Yes
Nickel	7440-02-0	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
Barium	7440-39-3	Yes	No	Yes
Copper	7440-50-8	Yes	No	Yes
Iron oxide	1309-37-1	Yes	No	Yes
Nickel	7440-02-0	Yes	No	Yes
Zinc	7440-66-6	Yes	No	Yes

Europe

Other

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

• 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
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Carc.Cat.3; R40 R43 T; R48/23

• Zinc	7440-66-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling		
• 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
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	T R:40-43-48/23 S:(2)-36/37/39-45
• Zinc	7440-66-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	E, 1
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	S, 7
• Zinc	7440-66-6	Not Listed
EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	S:53-45-60-61
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	S:(2)-36/37/39-45
• Zinc	7440-66-6	Not Listed

United States

Labor

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

Environment

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	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)
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	100 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); 45.4 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)

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed

• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	1.0 % de minimis concentration
• Copper	7440-50-8	1.0 % de minimis concentration
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	0.1 % de minimis concentration
• Zinc	7440-66-6	1.0 % de minimis concentration (dust or fume only)
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Included in waste stream: F039
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Included in waste streams: F006, F039
• Zinc	7440-66-6	Not Listed
U.S. - RCRA (Resource Conservation & Recovery Act) - Constituents for Detection Monitoring		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	(total)
• Zinc	7440-66-6	(total)
U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	100.0 mg/L regulatory level
• Copper	7440-50-8	Not Listed

• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	hazardous constituent - no waste number
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	hazardous constituent - no waste number
• Zinc	7440-66-6	Not Listed

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	(total)
• Zinc	7440-66-6	(total)

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	1.2 mg/L (wastewater); 21 mg/L TCLP (nonwastewater)
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	3.98 mg/L (wastewater); 11.0 mg/L TCLP (nonwastewater)
• Zinc	7440-66-6	2.61 mg/L (wastewater); 4.3 mg/L TCLP (nonwastewater)

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	(total)
• Copper	7440-50-8	(total)
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	(total)
• Zinc	7440-66-6	(total)

United States - California

Environment

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	carcinogen, initial date 10/1/89 (metallic)
• Zinc	7440-66-6	Not Listed

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

• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed

• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	Not Listed
• Zinc	7440-66-6	Not Listed

United States - Pennsylvania

Labor		
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	
• Copper	7440-50-8	(dust and fume)
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	
• Zinc	7440-66-6	
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances		
• 2,4,6-Trinitro-1,3-benzenediol lead salt	15245-44-0	Not Listed
• Barium	7440-39-3	Not Listed
• Copper	7440-50-8	Not Listed
• Iron oxide	1309-37-1	Not Listed
• Nickel	7440-02-0	
• Zinc	7440-66-6	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

15.3 Other Information

- WARNING: This product contains a chemical known to the State of California to cause cancer.

Section 16 - Other Information

Relevant Phrases (code & full text)

- H201 - Explosive; mass explosion hazard
- H302 - Harmful if swallowed
- H317 - May cause an allergic skin reaction
- H351 - Suspected of causing cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long lasting effects
- H412 - Harmful 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