



# Barnes Centerfire Rifle Loaded Ammunition with Copper Alloy Bullets

## 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

#### 1.1. Identification

Product form : Article  
Product name : Barnes Centerfire Rifle Loaded Ammunition with Copper Alloy Bullets  
Synonyms : Barnes VOR-TX® Safari Rifle cartridges with Banded Solid bullets

#### 1.2. Recommended use and restrictions on use

Recommended use : Ammunition  
Restrictions on use : Uses other than listed on the manufacturer product label

#### 1.3. Supplier

Barnes Bullets, LLC  
38 North Frontage Road  
Mona, UT 84645  
T 435-856-1000

#### 1.4. Emergency telephone number

Emergency number : CHEMTEL 1-800-255-3924

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Explosive Category 1.4 H204 Fire or projection hazard  
Carcinogenicity Category 1B H350 May cause cancer

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H204 - Fire or projection hazard  
H350 - May cause cancer

Precautionary statements (GHS US) :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P240 - Ground/Bond container and receiving equipment.  
P250 - Do not subject to grinding/shock/friction.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P370+P380 - In case of fire: Evacuate area.  
P372 - Explosion risk in case of fire.  
P373 - DO NOT fight fire when fire reaches explosives.  
P374 - Fight fire with normal precautions from a reasonable distance.  
P401 - Store in accordance with local regulations on explosives.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification :

This product is considered an explosive article. Each product covered by this Safety Data Sheet is sealed ammunition. The ammunition contains hazardous substances, which under normal conditions of use are not in contact with the user. If the item is fractured or intentionally disassembled prior to actuation, exposure to the contents of this ammunition may

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cause the following health effects. Toxic if swallowed or in contact with skin and harmful if inhaled. It may damage organs, cause genetic defects, and damage fertility or the unborn child. May be harmful to aquatic life with long lasting effects.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Lead	(CAS-No.) 7439-92-1	1.25 – 1.75	Carc. 1B, H350 Repr. 1A, H360
Nitroglycerin	(CAS-No.) 55-63-0	0 – 1.5	Unst. Expl., H200 Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 STOT RE 2, H373 Aquatic Chronic 2, H411
2,4-Dinitrotoluene	(CAS-No.) 121-14-2	0 – 1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 Muta. 2, H341 Carc. 2, H351 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
Chronic symptoms	: May cause cancer.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Not determined.

### 5.2. Specific hazards arising from the chemical

Explosion hazard	: Explosion risk in case of fire.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Evacuate area. Do not fight fire when fire reaches explosives. Fight fire with normal precautions from a reasonable distance.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Do not subject to grinding, shock, friction. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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No additional information available.	
Copper (7440-50-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (fume)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m <sup>3</sup> )	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
Zinc (7440-66-6)	
No additional information available.	
Nitrocellulose (9004-70-0)	
No additional information available.	
Lead (7439-92-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m <sup>3</sup> )	0.05 mg/m <sup>3</sup>
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans

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USA - ACGIH - Biological Exposure Indices	
Biological Exposure Indices (BEI)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: not critical (Note: Persons applying this BEI are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB (lead in blood level) over the current CDC reference value.)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m³)	50 µg/m³
Nitroglycerin (55-63-0)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	0.05 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (Ceiling) (mg/m³)	2 mg/m³
OSHA PEL (Ceiling) [ppm]	0.2 ppm
Limit value category (OSHA)	prevent or reduce skin absorption
2,4-Dinitrotoluene (121-14-2)	
No additional information available.	

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

Wear suitable protective clothing

#### Respiratory protection:

Wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid
Color	: Metallic
Odor	: Odorless
Odor threshold	: No data available.
pH	: No data available.
Melting point	: No data available.
Freezing point	: Not applicable
Boiling point	: No data available.
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available.
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available.
Relative vapor density at 20 °C	: No data available.
Relative density	: No data available.

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Solubility	: No data available.
Partition coefficient n-octanol/water (Log Pow)	: No data available.
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosion limits	: Not applicable
Explosive properties	: No data available.
Oxidizing properties	: No data available.

### 9.2. Other information

No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Fire or projection hazard.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.

Nitroglycerin (55-63-0)	
LD50 oral rat	100 mg/kg
LD50 dermal rabbit	> 280 mg/kg
ATE US (oral)	5 mg/kg body weight
ATE US (dermal)	5 mg/kg body weight
ATE US (dust, mist)	0.05 mg/l/4h

2,4-Dinitrotoluene (121-14-2)	
LD50 oral rat	268 mg/kg
LD50 dermal rat	> 2500 mg/kg
ATE US (oral)	268 mg/kg body weight
ATE US (dermal)	300 mg/kg body weight
ATE US (dust, mist)	0.5 mg/l/4h

Skin corrosion/irritation	: Not classified.
Serious eye damage/irritation	: Not classified.
Respiratory or skin sensitization	: Not classified.
Germ cell mutagenicity	: Not classified.
Carcinogenicity	: May cause cancer.

Lead (7439-92-1)	
IARC group	2A - Probably carcinogenic to humans

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Lead (7439-92-1)	
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes

2,4-Dinitrotoluene (121-14-2)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Evidence of Carcinogenicity
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified.

STOT-single exposure : Not classified.

STOT-repeated exposure : Not classified.

Nitroglycerin (55-63-0)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

2,4-Dinitrotoluene (121-14-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified.

Viscosity, kinematic : No data available.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Chronic symptoms : May cause cancer.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Lead (7439-92-1)	
LC50 fish 1	0.44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	600 µg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	1.17 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])

Nitroglycerin (55-63-0)	
LC50 fish 1	0.87 – 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	46 – 55 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 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])

2,4-Dinitrotoluene (121-14-2)	
LC50 fish 1	23 – 25.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	22.5 – 30.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	27.3 – 38 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC (acute)	316 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

### 12.2. Persistence and degradability

No additional information available.

### 12.3. Bioaccumulative potential

2,4-Dinitrotoluene (121-14-2)	
BCF fish 1	4 – 78
Partition coefficient n-octanol/water (Log Pow)	1.98

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### 12.4. Mobility in soil

No additional information available.

### 12.5. Other adverse effects

No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)

Transport document description : UN0012 Cartridges, small arms, 1.4  
UN-No.(DOT) : UN0012  
Proper Shipping Name (DOT) : Cartridges, small arms  
Class (DOT) : 1.4 - Class 1.4 - Explosives (with no significant blast hazard) 49 CFR 173.50  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 62  
DOT Packaging Bulk (49 CFR 173.xxx) : None  
DOT Packaging Exceptions (49 CFR 173.xxx) : 63  
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg  
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg  
DOT Vessel Stowage Location : 01 - The material may be stowed "on deck" or "under deck" on a cargo vessel (up to 12 passengers) and on a passenger vessel.  
DOT Vessel Stowage Other : 25 - Protected from sources of heat  
Other information : No supplementary information available.

### Transport by sea

Transport document description (IMDG) : UN 0012 CARTRIDGES, SMALL ARMS, 1.4S  
UN-No. (IMDG) : 0012  
Proper Shipping Name (IMDG) : CARTRIDGES, SMALL ARMS  
Class (IMDG) : 1 - Explosives  
Limited quantities (IMDG) : 5 kg

### Air transport

Transport document description (IATA) : UN 0012 Cartridges, small arms, 1.4S  
UN-No. (IATA) : 0012  
Proper Shipping Name (IATA) : Cartridges, small arms  
Class (IATA) : 1 - Explosive

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Barnes Centerfire Rifle Loaded Ammunition with Copper Alloy Bullets

SARA Section 311/312 Hazard Classes	Physical hazard - Explosive Health hazard - Carcinogenicity
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All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

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Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Copper	CAS-No. 7440-50-8	55 – 59%
Zinc	CAS-No. 7440-66-6	30 – 32%
Lead	CAS-No. 7439-92-1	1.25 – 1.75%
Nitroglycerin	CAS-No. 55-63-0	0 – 1.5%
2,4-Dinitrotoluene	CAS-No. 121-14-2	0 – 1%

### Lead (7439-92-1)

CERCLA RQ	10 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm
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### Nitroglycerin (55-63-0)

CERCLA RQ	10 lb
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### 2,4-Dinitrotoluene (121-14-2)

Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	10 lb

## 15.2. International regulations

### Lead (7439-92-1)

Listed on the TCSI (Taiwan Chemical Substance Inventory)
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### Nitroglycerin (55-63-0)

Listed on the TCSI (Taiwan Chemical Substance Inventory)
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### 2,4-Dinitrotoluene (121-14-2)

Listed on the TCSI (Taiwan Chemical Substance Inventory)
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## 15.3. US State regulations

 **WARNING:** This product can expose you to Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Component	State or local regulations
Lead(7439-92-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List
Nitroglycerin(55-63-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List
2,4-Dinitrotoluene(121-14-2)	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

## SECTION 16: Other information

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Full text of H-phrases:

H200	Unstable explosive
H204	Fire or projection hazard
H300	Fatal if swallowed
H301	Toxic if swallowed
H310	Fatal in contact with skin
H311	Toxic in contact with skin
H330	Fatal if inhaled
H331	Toxic if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H351	Suspected of causing cancer
H360	May damage fertility or the unborn child
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

SDS US (GHS HazCom 2012)

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