Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 11/06/2019 Revision date: 11/06/2019

Version: 1.0

Identification Product form Product name Synonyms Recommended use and restrictions Recommended use Restrictions on use Supplier o additional information available	 Article Barnes Centerfire Rifle and Pistol & Revolver Loaded Ammunition with All Copper Bullets Barnes VOR-TX® Safari Rifle cartridges with TSX® bullets; Barnes VOR-TX® Euro Rifle Cartridges; Barnes VOR-TX® Long Range Rifle cartridges; Barnes VOR-TX® Handgun cartridges on use Ammunition Uses other than listed on the manufacturer product label
Product name Synonyms 2. Recommended use and restrictions Recommended use Restrictions on use 3. Supplier	 Barnes Centerfire Rifle and Pistol & Revolver Loaded Ammunition with All Copper Bullets Barnes VOR-TX® Safari Rifle cartridges with TSX® bullets; Barnes VOR-TX® Euro Rifle Cartridges; Barnes VOR-TX® Long Range Rifle cartridges; Barnes VOR-TX® Handgun cartridges on use Ammunition
Synonyms 2. Recommended use and restrictions Recommended use Restrictions on use 3. Supplier	Barnes VOR-TX® Safari Rifle cartridges with TSX® bullets; Barnes VOR-TX® Euro Rifle Cartridges; Barnes VOR-TX® Long Range Rifle cartridges; Barnes VOR-TX® Handgun cartridges on use Ammunition
 Recommended use and restrictions Recommended use Restrictions on use Supplier 	Cartridges; Barnes VOR-TX® Long Range Rifle cartridges; Barnes VOR-TX® Handgun cartridges on use : Ammunition
Recommended use Restrictions on use 3. Supplier	: Ammunition
Restrictions on use 3. Supplier	
3. Supplier	: Uses other than listed on the manufacturer product label
additional information available	
additional information available	
4. Emergency telephone number	
o additional information available	
ECTION 2: Hazard(s) identification	
1. Classification of the substance or n	nixture
HS US classification	
Expl. 1.4 H204	Fire or projection hazard
ull text of hazard classes and H-statements : se	ee section 16
2. GHS Label elements, including pred	cautionary statements
HS US labeling	
Hazard pictograms (GHS US)	
Signal word (GHS US)	: Warning
Hazard statements (GHS US)	: H204 - Fire or projection hazard
Precautionary statements (GHS US)	 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 - Ground/Bond container and receiving equipment P250 - Be not achieve to minimize (basel/finition)
	P250 - Do not subject to grinding/shock/friction. P280 - Wear protective gloves/protective clothing/eye protection/face protection. 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 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation
3. Other hazards which do not result i	
Other hazards not contributing to the	: This product is considered an explosive article. Each product covered by this Safety Data
classification	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 cause the following health effects. Toxic if swallowed or in contact with skin and harmful if inhaled, and may damage organs through repeated exposure. May be harmful to aquatic life with long lasting effects.
4. Unknown acute toxicity (GHS US)	

Safety Data Sheet

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

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Copper	(CAS-No.) 7440-50-8	64 - 89	Not classified
Zinc	(CAS-No.) 7440-66-6	8 - 21	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Nitrocellulose	(CAS-No.) 9004-70-0	1 - 16	Expl. 1.1, H201
Nitroglycerin	(CAS-No.) 55-63-0	0-3	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 - 1.75	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 Muta. 2, H341 Carc. 1B, H350 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Urea, N,N'-diethyl-N,N'-diphenyl-	(CAS-No.) 85-98-3	0 - 1.25	Acute Tox. 4 (Oral), H302 Aquatic Chronic 3, H412
Dibutyl phthalate	(CAS-No.) 84-74-2	0 - 1	Repr. 1B, H360 Aquatic Acute 1, H400

Comments : This SDS covers multiple products all consisting of a load (lead, zinc), propellants, and primer components.

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 you feel unwell, seek medical advice (show the label where possible).
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 eff	ects (acute and delayed)
Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
4.3. Immediate medical attention and s	special treatment, if necessary
Not applicable.	
SECTION 5: Fire-fighting measures	
5.1. Suitable (and unsuitable) extinguis	shing 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.
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.

Safety Data Sheet

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

-		
SECTI	ON 6: Accidental release measu	ures
6.1.	Personal precautions, protective equi	pment and emergency procedures
6.1.1.	For non-emergency personnel	
Emerge	ency procedures	: No open flames, no sparks, and no smoking. Evacuate unnecessary personnel.
6.1.2.	For emergency responders	
Protect	ive 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 rel	lease to the environment.	
6.3.	Methods and material for containmen	t and cleaning up
Methoc	ds for cleaning up	Notify authorities if product enters sewers or public waters. In case of large spillages: Shovel or sweep up and put in a closed container for disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.
Other i	nformation	: Dispose of materials or solid residues at an authorized site.
6.4.	Reference to other sections	
For furth	er information refer to section 13.	
SECTI	ON 7: Handling and storage	
7.1.	Precautions for safe handling	
Precau	tions 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.
Hygien	e measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the

7.2.	Conditions for safe storage	e, including any incompatibilities
Technie	cal measures	: Ground/bond container and receiving equipment.
Storage	e conditions	: Store in a well-ventilated place. Keep cool.

product.

SECTION 8: Exposure controls/personal protection
--

8.1. Control parameters

Barnes Centerfire Rifle and Pistol & Revolver Loa	ded Ammunition with All Copper Bullets
No additional information available	
Copper (7440-50-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m³)	0.2 mg/m³ (fume) 1 mg/m³ (dust and mist)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m³)	0.1 mg/m³ (fume) 1 mg/m³ (dust and mist)
Zinc (7440-66-6)	
No additional information available	
Nitrocellulose (9004-70-0)	
No additional information available	
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/m ³)	2 mg/m ³
OSHA PEL (Ceiling) (ppm)	0.2 ppm
Limit value category (OSHA)	prevent or reduce skin absorption

Safety Data Sheet

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

Dibutyl phthalate (84-74-2)		
USA - ACGIH - Occupational Exposure	Limits	
ACGIH TWA (mg/m³)	5 mg/m³	
USA - OSHA - Occupational Exposure	imits	
OSHA PEL (TWA) (mg/m ³)	5 mg/m³	
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98	-3)	
No additional information available		
2,4-Dinitrotoluene (121-14-2)		
No additional information available		

8.2. Appropriate engineering controls

Appropriate engineering controls

Environmental exposure controls

: Ensure good ventilation of the work station.: 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:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical	properties
9.1. Information on basic physical and o	chemical properties
Physical state	: Solid
Appearance	: Solid.
Color	: Metallic
Odor	: odorless
Odor threshold	: No data available
рН	: 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)	: Not flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: No data available
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

according to Federal Register / Vol. 77, No. 58 / Monday, Ma	rch 26, 2012 / Rules and Regulations
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 condit	ions of use.
10.4. Conditions to avoid	
Avoid contact with hot surfaces. Heat. No flames, no	o sparks. Eliminate all sources of ignition
10.5. Incompatible materials	
No additional information available	
10.6. Hazardous decomposition products	
	lous decomposition products should not be produced. On combustion, forms: carbon oxides (CO and
CO2).	
SECTION 11: Toxicological information	1
11.1. Information on toxicological effects	
Acute toxicity (oral)	: Not classified.
Acute toxicity (dermal)	: Not classified.
Acute toxicity (inhalation)	: Not classified.
Zinc (7440-66-6)	
LD50 oral rat	630 mg/kg
ATE US (oral)	630 mg/kg body weight
Nitrocellulose (9004-70-0) LD50 oral rat	> 5 g/kg
	> 5 g/kg
Nitroglycerin (55-63-0)	400 mm/lim
LD50 oral rat LD50 dermal rabbit	100 mg/kg
ATE US (oral)	> 280 mg/kg 5 mg/kg body weight
ATE US (dermal)	5 mg/kg body weight
ATE US (dust, mist)	0.05 mg/l/4h
Dibutyl phthalate (84-74-2)	
LD50 oral rat	7499 mg/kg
LD50 dermal rabbit	> 20000 mg/kg
LC50 inhalation rat (mg/l)	>= 15.68 mg/l/4h
ATE US (oral)	7499 mg/kg body weight
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)	
LD50 oral rat	2750 mg/kg
ATE US (oral)	500 mg/kg body weight
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

Safety Data Sheet

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

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

2,4-Dinitrotoluene (121-14-2)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicology 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
Aspiration hazard Viscosity, kinematic	: Not classified : No data available
•	
Viscosity, kinematic	: No data available
Viscosity, kinematic Symptoms/effects	: No data available
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information	: No data available
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8)	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6)	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) < 2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1 EC50 Daphnia 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) < 1.6 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1 EC50 Daphnia 1 LC50 fish 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) < 1.6 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1 EC50 Daphnia 1 LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Nitroglycerin (55-63-0)	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) 2.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Pimephales promelas [static])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Nitroglycerin (55-63-0) LC50 fish 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) < 1.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Pimephales promelas [flow-through]) 0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static]) 0.87 - 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
Viscosity, kinematic Symptoms/effects ECTION 12: Ecological information 2.1. Toxicity Ecology - general Copper (7440-50-8) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Zinc (7440-66-6) LC50 fish 1 EC50 Daphnia 1 LC50 fish 2 Nitroglycerin (55-63-0) LC50 fish 1 EC50 Daphnia 1	 No data available Not expected to present a significant hazard under anticipated conditions of normal use. The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. 0.0068 - 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas) 0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) < 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) < 1.16 - 3.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) 0.139 - 0.908 mg/l (Exposure time: 48 h - Species: Pimephales promelas [flow-through]) 0.211 - 0.269 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static]) 0.87 - 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through]) 46 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna)

0.71 - 1.2 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

0.31 - 5.45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

2.99 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

3.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)

LC50 fish 1

LC50 fish 2

EC50 Daphnia 1

EC50 Daphnia 2

Safety Data Sheet

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

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

Barnes Centerfire Rifle and Pistol & Revolver	Loaded Ammunition with All Copper Bullets
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Barnes Centerfire Rifle and Pistol & Revolver Loaded Ammunition with All Copper Bullets					
Bioaccumulative potential Not established.					
Dibutyl phthalate (84-74-2)					
Log Pow 5.38 (at 25 °C)					
2,4-Dinitrotoluene (121-14-2)					
2,4-Difficiololuerie (121-14-2)					
BCF fish 1	4 - 78				
Log Pow	1.98				
0.4 Mahilitu in anil					
2.4. Mobility in soil					
Barnes Centerfire Rifle and Pistol & Revolver Loaded Ammunition with All Copper Bullets					
Ecology - soil	Not established.				
	••				

12.5. Other adverse effects

Effect on global warming

Not established

SECTION 13: Disposal considerations	S
13.1. Disposal methods	
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
SECTION 44. Transport information	

SECTION 14: Transport information

Department of Transportation (DOT) In accordance with DOT

Transport document description	: UN0012 Cartridges, small arms, 1.4, II
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
Packing group (DOT)	: II - Medium Danger
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 Other	: 25 - Protected from sources of heat

Safety Data Sheet

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

Other information	: No supplementary information available.
Transport by sea	
Transport document description (IMDG)	: UN 0012 CARTRIDGES, SMALL ARMS
UN-No. (IMDG)	: 0012
Proper Shipping Name (IMDG)	: CARTRIDGES, SMALL ARMS
Class (IMDG)	: Not regulated for transport
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)	: Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

Copper (7440-50-8)			
Listed on the United States TSCA (Toxic Substan Subject to reporting requirements of United State			
CERCLA RQ	5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 μ m		
Zinc (7440-66-6)			
Listed on the United States TSCA (Toxic Substan Subject to reporting requirements of United State			
CERCLA RQ	454 kg no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 μm		
Nitrocellulose (9004-70-0)			
Listed on the United States TSCA (Toxic Substa	nces Control Act) inventory		
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).		
Nitroglycerin (55-63-0)			
Listed on the United States TSCA (Toxic Substan Subject to reporting requirements of United State			
CERCLA RQ	10 lb		
Dibutyl phthalate (84-74-2)			
Listed on the United States TSCA (Toxic Substat Subject to reporting requirements of United State Listed on EPA Hazardous Air Pollutant (HAPS)			
CERCLA RQ	10 lb		
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)			
Listed on the United States TSCA (Toxic Substa	nces Control Act) inventory		
2,4-Dinitrotoluene (121-14-2)			
Listed on the United States TSCA (Toxic Substat Subject to reporting requirements of United State Listed on EPA Hazardous Air Pollutant (HAPS)			
CERCLA RQ 10 lb			

15.2. International regulations

CANADA

Safety Data Sheet

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

Copper (7440-50-8)
Listed on the Canadian DSL (Domestic Substances List)
Zinc (7440-66-6)
Listed on the Canadian DSL (Domestic Substances List)
Nitrocellulose (9004-70-0)
Listed on the Canadian DSL (Domestic Substances List)
Nitroglycerin (55-63-0)
Listed on the Canadian DSL (Domestic Substances List)
Dibutyl phthalate (84-74-2)
Listed on the Canadian DSL (Domestic Substances List)
Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)
Listed on the Canadian DSL (Domestic Substances List)
2,4-Dinitrotoluene (121-14-2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Conner	(7440-50-8)
Copper	7440-30-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Zinc (7440-66-6)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Nitroglycerin (55-63-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Dibutyl phthalate (84-74-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

2,4-Dinitrotoluene (121-14-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Barnes Centerfire Rifle and Pistol & Revolver Loaded Ammunition with All Copper Bullets

All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory

Copper (7440-50-8)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Zinc (7440-66-6)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Safety Data Sheet

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

	rding to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
ſ	Nitrocellulose (9004-70-0)
	Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)
Ī	Nitroglycerin (55-63-0)
	Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIOC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)
	Dibutyl phthalate (84-74-2)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)	
	Urea, N,N'-diethyl-N,N'-diphenyl- (85-98-3)
	Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the TCSI (Taiwan Chemical Substance Inventory)
	2,4-Dinitrotoluene (121-14-2)
	Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIOC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Japanese Pollutant Release and Transfer Register Law (PRTR Law) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

Dibutyl phthalat	te (84-74-2)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	Yes	Yes		8.7 μg/day

Safety Data Sheet

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

2,4-Dinitrotolue	ne (121-14-2)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	Yes	2 μg/day	
Component		State or local regulations			
Copper(7440-50-8)		U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S Pennsylvania - RTK (Right to Know) List			
Zinc(7440-66-6) Nitrocellulose(9004-70-0)		 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 U.S Massachusetts - Right To Know List; U.S New Jersey - Right to Know Hazardous Substance List; U.S Pennsylvania - RTK (Right to Know) List 			
					Nitroglycerin(55-63-0)
Dibutyl phthalate(84-74-2)		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			
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

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

Revision date

: 11/06/2019

Safety Data Sheet

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

Full text of H-phrases:

I lext of H-prirases.	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral) Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Carc. 1B	Carcinogenicity Category 1B
Expl. 1.1	Explosive Category 1.1
Expl. 1.4	Explosive Category 1.4
Muta. 2	Germ cell mutagenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
Unst. Expl	Unstable explosives
H200	Unstable explosive
H201	Explosive; mass explosion hazard
H204	Fire or projection hazard
H300	Fatal if swallowed
H301	Toxic if swallowed
H302	Harmful 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
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
H412	Harmful to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

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