

SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS, OSHA 29CFR 1910.1200

Section 1: Product and Company Identification

PRODUCT SUPPLIER COMPANY NAME

Naval Company, Inc.
Cold Spring Creamery Road
Doylestown, PA 18902-1208
USA
Information: 215-348-8982
Fax: 215-348-5637

Safety Data Sheet Competent Person: sales@navalcompany.com

EMERGENCY TELEPHONE

Spill, Leak Exposure, or Incident
INFOTRAC 24-hour Numbers:
GLOBAL (+1) 352-323-3500
USA ONLY: 800-535-5053
REF: CCN 106336

DATE PREPARED: October 9, 2008

REVISION DATE: May 5, 2021

PRODUCT NAME:

45/70 Blank Cartridges

FORMULA:

Preparation/Mixture

PRODUCT USE:

Blank Cartridges for Bridger™ Line Throwing Gun made by Naval Co. Inc.

Section 2: Hazards Identification

Be sure to thoroughly read and understand the *Instructions* and *Safety Precautions* included with the Bridger Line Throwing Gun kit.

GHS Hazard Class

Signal word:

Hazard Statement:

Precautionary Statements:

Prevention

Response

Storage

Disposal

Explosive Division 1.4

Warning

H204

P210

P234

P240

P250

P280

protection/face protection.

P370+P372+P380

P373

P370+P380+P375

risk of explosion.

P401

P501

or local authorities.

Fire or projection hazard

Keep away from heat, sparks, and open flames – NO smoking.

Keep only in original package

Ground/bond container and receiving equipment.

Do not subject to grinding/shock/friction

Wear protective gloves/protective clothing/eye

protection/face protection.

In case of fire: Explosion risk. Evacuate area. DO NOT fight

reaches explosives.

In case of fire: Evacuate area. Fight fire remotely due to the

risk of explosion.

Store in accordance with industry standards for safe storage.

Follow the waste disposal requirements of your country,

state,



HAZARD CLASSIFICATION:

FIRE AND EXPLOSION:

Classified As Hazardous Based On IMO and DOT.

DO NOT FIGHT FIRES. Black powder may deflagrate or explode in a fire while confined.

EVACUATE AREA.

INJURY FROM DETONATION:

Seek prompt medical attention!

OTHER:

Black Powder Blank Cartridges are explosive, and detonation may cause severe physical injury, including death. All explosives are dangerous and must be handled carefully and used following approved safety procedures under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, and ordinances.

Explosives Temps (5 Sec) – Ignited

Approximately 427°C (801°F)

Velocity in the open: trains of black powder usually burn very slowly, measurable in seconds per foot. Confined, as in steel pipe, speeds of explosions have been times at values from 560 feet per second for very coarse granulations to 2,070 feet per second for finer granulations. Confinement and granulation will affect the values.

CHRONIC EFFECTS OF OVEREXPOSURE:
APPEARANCE:
COLOR:
PHYSICAL STATE:
ODOR:

None
Sealed blank brass cartridge (cylindrical tube) contains black granular powder and primer.
Solid
No detectable odor.

Section 3: Composition, Information on Ingredients

These cartridges contain either potassium nitrate or sodium nitrate in the percentages indicated. These cartridges **do not contain both**.

PRODUCT COMPOSITION	APPROX %	CAS NO.	DSL CANADA
Potassium Nitrate	38 -42	7757-79-1	Y
Sodium Nitrate	38 -42	7631-99-4	Y
Charcoal	3 -10	7440-44-0	Y
Sulphur	4 - 11	7704-34-9	Y
Graphite	Trace	7782-42-5	Y
Empty unprimed brass shell	20 -40		
Wad, vegetable fiber	3 - 6		
Primer	1 - 5		

Some items on this SDS may be designated as trade secrets (TS). Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

Description of First Aid Measures

INGESTION: Not a likely route of exposure. If swallowed do not induce vomiting. Get immediate medical attention.
 INHALATION: Not a likely route of exposure. A very small amount of inhalable particles may be created when cartridge is fired.
 SKIN CONTACT: Not a likely route of exposure. Wash skin with soap and water.
 EYE CONTACT: Not a likely route of exposure. Flush eyes with water.

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation: Not a likely route of exposure. A very small amount of inhalable particles may be created when cartridge is fired.
 Symptoms/Injuries after Skin Contact: Not a likely route of exposure. Wash skin with soap and water.
 Symptoms/Injuries after Eye Contact: Not a likely route of exposure. Flush eyes with water.
 Symptoms/Injuries after Ingestion: Not a likely route of exposure.

Indication of any immediate medical attention and special treatment needed

Injury from detonation: Seek prompt medical attention!

Section 5: Fire-fighting Measures

Suitable extinguishing media

Use water, foam, dry chemical, or carbon dioxide.

Special hazards arising from the substance or mixture

No data available.

Protective actions fire-fighters

Wear standard protective equipment if necessary.

Further information

DO NOT FIGHT FIRES. Black powder may deflagrate or explode in a fire while confined. EVACUATE AREA.

If safe to do prevent fire from reaching explosives.

Section 6: Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures

Wear proper protective equipment as specified in Section 8: Exposure Controls/Personal Protection

Warn other workers of spill and contain spill.

Place material into a chemical waste container.

Eliminate all sources of ignition and ventilate area.

Prevent spills or contaminated rinse water from entering sewers or watercourses.

Environmental precautions

None

Methods and materials for containment and cleaning up

Encapsulated in the shell, this is unlikely to be a concern. However, in case ANY powder is exposed or there is a threat of instability in the area, use appropriate personal protective equipment. Isolate areas and remove sources of friction, impact, heat, low-level electric current, electrostatic or RF energy. Only competent, experienced persons should be involved in cleanup procedures.

Reference to other Sections For personal protection reference section 8. For disposal reference section 13.

Section 7: Handling and Storage

Precautions for safe handling

Take precautionary measures against static discharge.

Keep away from heat, sparks, flame, direct sunlight and other possible sources of ignition.

Use only with adequate ventilation.

Wear proper protective equipment when handling this material.

Wash hands after handling this material.

For precautions see section 2.

Wear only metal free and non-static producing clothes. Impervious rubber gloves are recommended.

NO SMOKING.

Store blank cartridges in cool, dry place.

Keep away from friction, impact, heat, and open flame.

Incompatible Materials for Storage or Transport: Class A & B explosives, strong oxidizers and/or acids

Precautions for Repair and Maintenance of Contaminated Equipment:

Affected equipment must be thoroughly water cleaned before attempting repairs.

Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities

Store in original containers in cool, dry, well-ventilated areas away from all sources of ignition.

Do not subject to mechanical shock.

Keep out of reach of children.

This product must not be stored with acids, strong oxidizers, or caustics.

Shelf Life: 25-30 years, indefinite

Specific uses Blank Cartridges for Bridger[™] Line Throwing Gun made by Naval Co. Inc.

Section 8: Exposure Controls/Personal Protection

Control Parameters

PRODUCT COMPOSITION	ACGIH TLV	OSHA PEL	NIOSH REL
Potassium Nitrate			
Sodium Nitrate			
Charcoal	2 mg/m3	15 mg/m3 Total dust. 5 mg/m3 Respirable	
Sulphur			
Graphite	2 mg/m3	15 mppcf	2 mg/m3
Empty unprimed brass shell			
Wad, vegetable fiber			
Primer			

Exposure controls

VENTILATION:	Provide adequate ventilation where this material is used.
RESPIRATORY PROTECTION:	Not required
PROTECTIVE GLOVES:	Not required
EYE PROTECTION:	Recommend eye protection using safety glasses or goggles.
HEARING PROTECTION:	Hearing protection recommended when firing.
SKIN PROTECTION:	Not required
WORK/HYGIENE PRACTICES:	Wash hands after handling. Avoid contact with eyes.
OTHER EQUIPMENT:	None

Section 9: Physical and Chemical Properties

	PRODUCT CRITERIA
APPEARANCE - COLOR	Scaled brass blank cartridge (cylindrical tube) with primer containing black granular powder which is securely enclosed with a natural fiber wad in the open end of the blank cartridge.
PHYSICAL STATE	Solid
ODOR	No detectable odor
ODOR THRESHOLD	Data not available
PH	6.0 - 8.0
MELTING POINT/FREEZING POINT	Data not available
INITIAL BOILING POINT AND BOILING RANGE	Data not available
FLASH POINT	Data not available
EVAPORATION RATE	Data not available
FLAMMABILITY (Solid, gas)	Data not available
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Data not available
VAPOR PRESSURE	Data not available
VAPOR DENSITY (AIR = 1)	Data not available
RELATIVE DENSITY (@25 °C)	1.7- 1.82 (mercury method) 1.92-2.08 (pycnometer)
SOLUBILITY(IES)	Data not available
OXIDIZING PROPERTIES	Data not available
PARTITION COEFFICIENT: n-octanol/water	Data not available
AUTO IGNITION TEMPERATURE	Data not available
DECOMPOSITION TEMPERATURE	Data not available
VISCOSITY	Data not available
EXPLOSIVE PROPERTIES	Data not available
AUTO IGNITION TEMPERATURE:	Approximately 200°C - 464°C (392°F - 867°F)

Section 10: Stability and Reactivity

Reactivity	Not reactive.
Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur
Conditions to Avoid	Keep away from heat, sparks, and open flame. Avoid impact, friction, and static electricity
Incompatibility (Materials to Avoid)	Class A and B explosives, strong oxidizers, and acids.
Hazardous Decomposition Products	None

Section 11: Toxicological Information

GHS Required Criteria	Toxicity Criteria	Toxicity Information	Comments	Chemical Constituent
Acute Toxicity	LD50 (Oral/Rat):	1267 mg/kg		Sodium Nitrate
	LD50 (Oral/Rat):	3750 mg/kg		Potassium Nitrate
Skin Corrosion/Irritation		No information is available.		
Serious Eye Damage / Eye Irritation		8 ppm	Irritant	Sulfur
Respiratory or Skin Sensitization		No information is available.		
Germ Cell Mutagenicity		No information is available.		
Carcinogenicity		Not listed	NTP	
		Not listed	IARC	
		Not listed	OSHA	
Reproductive Toxicity		No information is available.		
STOT -- Single Exposure		No information is available.		
STOT -- Repeated Exposure		No information is available.		
Aspiration Hazard		No information is available.		

STOT = Specific Target Organ Systemic Toxicity

Section 12: Ecological Information

BIODEGRADATION:	No information is available.	
BIOACCUMULATION:	No information is available.	
ECO TOXICITY:	No information is available.	
MOBILITY:	No information is available.	

Section 13: Disposal Considerations

Waste from residues/unused products: Carefully pick up spills with non-sparking and non-static producing tools. Desensitize exposed powder by diluting in water. Water will dissolve out the potassium nitrate. By leaching out the potassium nitrate, the residue of sulfur and charcoal is non-explosive, but combustible — dispose separately Follow the waste disposal requirements of your country, state, or local authorities.

Contaminated packaging: Contaminated packaging material should be disposed of as stated above for residues and unused product.

Rinsate: Do not dispose of rinse water containing product in a sanitary sewer system, storm water drainage system, or wastewater treatment system.

Section 14: Transport Information

ROAD TRANSPORT:

ADR = International Carriage of Dangerous Goods by Road

UN NUMBER:	UN 0014
DOT PROPER SHIPPING NAME	Cartridges for weapons, blank <i>or</i> Cartridges, small arms, blank
DOT / ADR HAZARD CLASS:	1.4S Explosives (with no significant blast hazard)
DOT / ADR LABELS:	1.4S (exception: Limited quantity ground)
PLACARD:	None

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DOT / ADR PACKAGING GROUP: II
HAZARD NUMBER – ADR: UN 0014
ADR PROPER SHIPPING NAME: Cartridges for weapons, blank *or* Cartridges, small arms, blank
Box Spec Box

DOT REPORTABLE QUANTITY (49 CFR 172.101, APP.) and CERCLA REPORTABLE QUANTITY (40 CFR PART 302, TABLE 302.4) HAZARDOUS SUBSTANCE(S) NAME / (CAS NO.), CONTENT(S) AND RQ: Not applicable

The material described above is subject to the U. S. DOT HAZARDOUS MATERIALS REGULATIONS via the modes and packaging quantities indicated below with the letter “X”:

MODE	PACKAGING QUANTITIES
<u>X</u> Rail	_____ Bulk <u>X</u> Non-Bulk
<u>X</u> Motor	_____ Bulk <u>X</u> Non-Bulk
<u>X</u> Water	_____ Bulk <u>X</u> Non-Bulk
<u>X</u> Air	_____ Bulk <u>X</u> Non-Bulk

DOT (USA) : ERG # 114
ICAO / IATA ERG CODE: 3L

SEA TRANSPORT: IMDG

PROPER SHIPPING NAME: Cartridges for weapons, blank *or* Cartridges, small arms, blank
UN NUMBER SEA: UN 0014
CLASS: 1.4S Explosives (with no significant blast
hazard) PACKAGING GROUP: II

EmS No.: F-B, S-X
MARINE POLLUTANT: No
SEA TRANSPORT NOTES: Category 05 Stowage and segregation

AIR TRANSPORT: IATA/ICAO

UN NUMBER: UN 0014
PROPER SHIPPING NAME: Cartridges, small arms, blank
HAZARD CLASS: 1.4S
LABELS: Explosive 1.4S
PACKAGING GROUP: None

1.4S label required for all AIR “Hazmat” shipments of this item. The applicable packaging sections in 49 CFR are 173.63 and 173.62 or in IATA Packing Instructions 130. Notice state and carrier variations. When shipping via GROUND in the USA (only), it may be reclassified as a LIMITED QUANTITY (LTD QTY). The package then requires a proper LTD QTY LABEL - only. “LTD QTY” is for ground shipping in the USA only! This item is always “hazmat” via AIR.

Section 15: Regulatory Information

TOXIC SUBSTANCES CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are listed on the TSCA Inventory.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all MSDS’s that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: None

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.
The California proposition 65 chemical(s) contained in this product are: None

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Florida Toxic Substance(s):	Not listed
Massachusetts’s hazardous substance(s):	Not listed
Pennsylvania hazardous substance code(s):	Not listed
New Jersey	Not listed
Illinois	Not listed
Michigan	Not listed

CANADA:

This MSDS/SDS will be non-compliant 3 years after the issue date. This MSDS contains all of the information required by the Controlled Products Regulations (CPR).

WHMIS-INFORMATION:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR), SOR/88-66, Current to February 20, 2012. The classes of controlled products listed in the CPR, Section 32, Part IV, have been reviewed and based on Professional Judgment this product has been determined to not be WHMIS controlled.

Section 16: Other Information

Initial issue date:	Updated from May 15, 2014
Final revision date:	May 5, 2021
Revision Number:	3
Revision explanation:	Compliance with OSHA GHS
Information Sources:	OSHA 29CFR 1910.1200

A copy of this SDS is available at

<https://www.navalcompany.com/safety.htm>

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF USERS OR PERSONS HANDLING THIS PRODUCT. NAVAL COMPANY INC. BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MATERIAL SAFETY DATA SHEET IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT NAVAL COMPANY INC. AT THE PHONE NUMBER LISTED BELOW TO MAKE CERTAIN THAT THIS MSDS IS CURRENT.