Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

1 Identification

· **Product identifier**

· **Trade name: Foam Baton Cartridge, 3 Batons**
· **Product code:** MP-40-F3

· **Recommended use and restriction on use**
· **Recommended use:** Explosive product.
· **Restrictions on use:** Contact manufacturer

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
NonLethal Technologies, Inc.
9419 Rt 286 Hwy W
Homer City, PA 15748
USA
+1 724-479-5100
nlt@nonlethaltechnologies.com

· **Emergency telephone number:** 1-800-255-3924 (Intl.: +1 813-248-0585) (CHEMTEL # MIS9685256)

2 Hazard(s) identification

· **Classification of the substance or mixture**
Expl. 1.4 H204 Fire or projection hazard.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**
The following pictograms are optional for OSHA GHS labeling; GHS01. Notification is still required on the SDS.

GHS01

· **Signal word:** Warning
· **Hazard statements:**
H204 Fire or projection hazard.
· **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P250	Do not subject to grinding/shock/friction.
P280	Wear protective gloves / eye protection / face protection.
P373	DO NOT fight fire when fire reaches explosives.
P370+P380	In case of fire: Evacuate area.
P372	Explosion risk in case of fire.
P401	Store in accordance with local/regional/national/international regulations.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

(Cont'd. on page 2)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 1)

· **Explosive Product Notice**
PREVENTION OF ACCIDENTS IN THE USE OF EXPLOSIVES - The prevention of accidents in the use of explosives is a result of careful planning and observance of the best known practices. The explosives user must remember that he is dealing with a powerful force and that various devices and methods have been developed to assist him in directing this force. He should realize that this force, if misdirected, may either kill or injure both him and his fellow workers.

WARNING - All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances. If you have any questions or doubts as to how to use any explosive product, DO NOT USE IT before consulting with your supervisor, or the manufacturer, if you do not have a supervisor. If your supervisor has any questions or doubts, he should consult the manufacturer before use.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7757-79-1	potassium nitrate Ox. Sol. 2, H272	60-80%
16291-96-6	charcoal Flam. Sol. 1, H228	10-20%
7704-34-9	sulfur Skin Irrit. 2, H315	10-20%
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate Unst. Expl., H200 Repr. 1A, H360; STOT RE 2, H373 Acute Tox. 4, H302; Acute Tox. 4, H332	<1%
10022-31-8	barium nitrate Acute Tox. 4, H302; Acute Tox. 4, H332	<1%
1345-04-6	antimony sulphide	<1%
7782-42-5	graphite	<1%

· **Additional information:**
For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Information is only applicable to product contents, and not to product as normally supplied. This information is applicable to damaged, leaking, or spilled product as contact with contents is possible under these conditions.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Wash with soap and water.

(Cont'd. on page 3)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 2)

If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Unlikely route of exposure.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:** Blast injury if mishandled.
· **Danger:** Danger of blast or crush-type injuries.
· **Indication of any immediate medical attention and special treatment needed:**
Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression effects.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
DO NOT fight fire when fire reaches explosives.
Flood area with water. If no water is available, carbon dioxide, dry chemical or earth may be used. If the fire reaches the cargo, withdraw and let fire burn.
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
Product may explode if burned in confined space. Individual cartridges may explode. Mass explosion of many cartridges at once is unlikely.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information:**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.
Flammability Classification: (defined by 29 CFR 1910.1200) Explosive. Can explode under fire conditions. Individual devices will randomly explode. Will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. In unusual cases, shrapnel may be thrown from exploding devices under containment. See 2008 Emergency response Guidebook for further information.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Wear protective equipment. Keep unprotected persons away.
Remove persons from danger area.
Ensure adequate ventilation.
Protect from heat.
Isolate area and prevent access.

(Cont'd. on page 4)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 3)

· **Environmental precautions:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Methods and material for containment and cleaning up:**
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
· **Reference to other sections:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**
· **Precautions for safe handling:** Handle with care. Avoid jolting, friction and impact.
· **Information about protection against explosions and fires:**
Protect from heat.
Emergency cooling must be available in case of nearby fire.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from flammable substances.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s):** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	
EV (Canada)	Long-term value: 0.05 mg/m³ as Pb, Skin (organic compounds)
10022-31-8 barium nitrate	
PEL (USA)	Long-term value: 0.5 mg/m³ as Ba
REL (USA)	Long-term value: 0.5 mg/m³ as Ba
TLV (USA)	Long-term value: 0.5 mg/m³ as Ba

(Cont'd. on page 5)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 4)

EL (Canada)	Long-term value: 0.5 mg/m³ as Ba
LMPE (Mexico)	Long-term value: 0.5 mg/m³ A4; como Ba
1345-04-6 antimony sulphide	
PEL (USA)	Long-term value: 0.5 mg/m³ as Sb
REL (USA)	Long-term value: 0.5 mg/m³ as Sb
TLV (USA)	Long-term value: 0.5 mg/m³ as Sb
EL (Canada)	Long-term value: 0.5 mg/m³ as Sb
LMPE (Mexico)	Long-term value: 0.5 mg/m³ como Sb
7782-42-5 graphite	
PEL (USA)	Long-term value: 15 mppcf* mg/m³ *impinger samples counted by light field techn.
REL (USA)	Long-term value: 2.5* mg/m³ *respirable dust
TLV (USA)	Long-term value: 2* mg/m³ all forms except graphite fibers;*resp. fraction
EL (Canada)	Long-term value: 2 mg/m³ respirable
EV (Canada)	Long-term value: 2 mg/m³ respirable
LMPE (Mexico)	Long-term value: 2* mg/m³ *fracción respirable

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:** Not required under normal conditions of use.
· **Protection of hands:**
Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

(Cont'd. on page 6)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 5)

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No relevant information available.
· **Risk management measures**
Organizational measures should be in place for all activities involving this product.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Solid metal cylinder
Color:	According to product specification
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	Not determined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Fire or projection hazard.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Heating may cause an explosion.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not applicable.
· **Density:**	Not determined.
· **Relative density:**	Not determined.
· **Vapor density:**	Not applicable.
· **Evaporation rate:**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Insoluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No relevant information available.

(Cont'd. on page 7)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 6)

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions:**
Fire or projection hazard.
Toxic fumes may be released if heated above the decomposition point.
Reacts with strong acids and alkali.
· **Conditions to avoid:**
Excessive heat.
Sources of ignition, open flame, incompatible materials.
· **Incompatible materials:** Oxidizers, strong bases, strong acids
· **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Nitrogen oxides
Sulfur oxides (SOx)

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
15245-44-0 lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate		
Oral	LD50	650 mg/kg (rat)

· **Primary irritant effect:**
· **On the skin:**
Not a skin irritant in unused form. Vapors/particles from used product are possibly irritating to skin.
· **On the eye:**
Not an eye irritant in unused form. Vapors/particles from used product are possibly irritating to eyes.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer):**		
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	2B

· **NTP (National Toxicology Program):**		
15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	R

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Skin contact.
Eye contact.
· **Acute effects (acute toxicity, irritation and corrosivity):** Danger of blast or crush-type injuries.
· **Repeated dose toxicity:** From product as supplied: None.

(Cont'd. on page 8)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 7)

· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** May be accumulated in organism
· **Mobility in soil:** No relevant information available.
· **Ecotoxical effects:**
· **Remark:** Harmful to fish
· **Additional ecological information**
· **General notes:**
Avoid release to the environment.
The product contains heavy metals. Avoid transfer into the environment. Specific preliminary treatments are necessary.
Harmful to aquatic organisms
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
· **Other adverse effects:** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Incinerate in accordance with local, state and federal regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN0012

(Cont'd. on page 9)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 8)

· **UN proper shipping name**	
· **DOT, ADR, IMDG, IATA**	CARTRIDGES FOR WEAPONS, INERT PROJECTILE
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	1.4S
· **Label**	1.4S
· **ADR, IMDG, IATA**	
· **Class**	1.4S
· **Label**	1.4S
· **Packing group**	
· **DOT**	II
· **Environmental hazards**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **EMS Number:**	F-S,B-X
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 304 (emergency release notification):**
None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7757-79-1	potassium nitrate

(Cont'd. on page 10)

Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 9)

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

10022-31-8	barium nitrate	D, CBD(inh), NL(oral)

· **IARC (International Agency for Research on Cancer):**

15245-44-0	lead 2,4,6-trinitro-m-phenylene dioxide/ lead styphnate	2B

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 06/23/2016 / -

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
LDLo: Lowest Lethal Dose Observed
Expl. 1.4: Explosives – Division 1.4
Unst. Expl.: Explosives – Unstable explosive
Flam. Sol. 1: Flammable solids – Category 1
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Repr. 1A: Reproductive toxicity – Category 1A
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

(Cont'd. on page 11)

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date: 06/23/2016 Revision: 06/23/2016

Trade name: Foam Baton Cartridge, 3 Batons

(Cont'd. of page 10)

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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