



Security Devices International Inc. Blunt Impact Projectile – BIP

Material Safety Data Sheet Version C-1
Updated: February 19, 2015



This Material Safety Data Sheet (MSDS) has been prepared in compliance with ANSI, EEC, ILO, ISO, and the United States Department of Labor Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200. This product may be considered to be a hazardous chemical under that standard (refer to the OSHA Classification in Section I). This information is required to be disclosed for safety in the workplace.

WARNING

The product has a Department of Transportation (DOT) Explosive Hazard Classification 1.4S, PG-II Rating. However, 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, and ordinances. If, after carefully reading the information included in this MSDS, you have questions or doubts as to how to use the device, do not use it before consulting your supervisor, or the manufacturer. If your supervisor has any questions or doubts, they should consult the manufacturer before use. See "SECTION XVI – Other Information"

SECTION I – Product Name and Manufacture Identification

Product Name: 40MM BIP (Blunt Impact Projectile)
Manufacturer: Security Devices International Inc.
Address: 600-4830 W. Kennedy Blvd., Tampa FL, 33609
Phone Number: (813) 509-2301

SECTION II – Composition and Information on Ingredients

Exposure Limit (Product): None required for this product.
Carcinogenicity: None of the components on this material are listed as a carcinogen by NTP, IARD, or OSHA.

<i>Hazardous Ingredients</i>	<i>TWA (OSHA)</i>	<i>CAS Number</i>
<i>Propellant</i>		
Nitrocellulose	10 mg/m ³	9004---70---0
Ethyl Centralite	NA	85---98---3
Potassium Nitrate	NA	7757---79---1
Graphite	None	7782---42---5
<i>Primer</i>		
Copper	None	744---50---8
Lead	0.05 mg/m ³	7439---91---1
Zinc, as oxide	10 mg/m ³	7440---66---6
Potassium Chlorate	None	3811---87---0
Lead Thiocyanate	0.05 mg/m ³	592---87---0
Trinitrotoluene	1.5 mg/m ³	118---95---7
Calcium Silicide	None	12013---55---7
Barium Nitrate	None	1002---31---8
Glass Powder	None	65997---17---3



<i>Projectile</i>		
Silica, amorphous	6 mg/m ³	07631---86---9
Polyamide Resin	15 mg/m ³	25038---54---4
Polystyrene	10 mg/m ³	9003---53---6
Pentane	1800 mg/m ³	109---66---0
<i>Varnish</i>		
Oil Modified Polyurethane Resin	None	Proprietary
Mineral Spirits	2000 mg/m ³	64742---88---7
Stoddard Solvent	2900 mg/m ³	8052---41---3
Methyl Ethyl Ketoxime	NA	96---29---7
Silicon Dioxide	None	112926---00---8

SECTION III – Hazard Identification

OSHA Hazard Classification:	Explosive, irritant to skin and eyes.
Eye:	Minor irritation
Skin:	Acute: Minor irritation Chronic: Minor irritation
Inhalation:	Acute: Minor irritation Chronic: May cause damage to blood and central nervous system
Ingestion:	Acute: Not a viable route Chronic: Not a viable route

SECTION IV – First Aid

Eyes:	Flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician.
Skin:	For burns use standard first aid methods.
Inhalation:	Remove for fresh air. Consult a physician if irritation occurs.
Ingestion:	Not a viable route.

SECTION V – Fire and Explosive Hazard Information

Flammability Data:

Flammable:	N/A
Combustible:	N/A
Pyrophoric:	No
Explosive:	Yes
Flash Point:	N/A
Auto-Ignition Temperature:	No data available.
Flammable Limits at Normal Atmospheric Temperature and Pressure (% Volume in Air):	LEL - N/A UEL - N/A



NFPA Rating:	Not Established
HMIS Ratings:	
Health:	Not Established
Flammability:	Not Established
Reactivity:	Not Established
Extinguishing Media	Water spray. Apply by mechanical means only.
Fire Fighting Techniques and Comments:	Fight all fires from a remote and explosion resistant site. Evacuate all non-essential personnel. Use water to cool containers exposed to fire.

SECTION VI – Accidental Release Measures

Reportable Quantity:	Consult federal, state and local regulations for any reporting or notification requirements.
Storage Conditions:	Store in a cool, dry area remote from all sources of ignition. Store these items with compatible hazard class (1.4) and storage group (C). Do not subject to mechanical shock.
Do Not Store at Temperatures above:	150oF. Avoid heat (confinement), stacking, and burning.
Product Stability and Compatibility:	
Shelf Life Limitations:	Indefinite at 50 – 900F and 35% relative humidity.
Incompatible Materials for Packaging:	Package only in DOT approved containers.
Incompatible Materials for Storage and Transport:	N/A
Storage Compatibility Group:	C
Spill Mitigation Procedures:	This product may represent an explosion hazard. Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel.
Spill Cleanup:	A material spill should only be addressed by personnel experienced in handling energetic materials. Use non-sparking tools and avoid subjecting materials to mechanical shock.
Personal Protection for Emergency Spill and Firefighting Situations:	No extra protection required beyond that listed in section 5. In the case of fire, use normal fire-fighting equipment. Use SCBA if smoke from incident is a breathing hazard.

SECTION VII – Handling and Storage

Storage Conditions:	Store in a cool, dry area remote from all sources of ignition. Store these items with compatible hazard class (1.4) and storage group (C). Do not subject to mechanical shock.
Do Not Store at Temperatures Above:	150°F
Product Stability and Compatibility:	
Shelf Life Limitations:	Indefinite at 50–90°F and 35% relative humidity.
Incompatible Materials for Packaging:	Package only in DOT approved containers.
Incompatible Materials for Storage or Transport:	N/A
Storage Compatibility Group:	C



SECTION VIII – Exposure Controls and Personal Protection

Personal Protection for Routine Use of Product:

Respiratory Protection:	Respiratory protection not normally needed. Avoid prolonged breathing of decomposition products.
Ventilation:	Use only in open areas with adequate ventilation.
Skin Protective Equipment:	Avoid skin contact with materials and decomposition products.
Other:	N/A

Equipment Specifications (when applicable):

Protective Clothing Type:	When applicable use protective clothing, including gloves, boots, and eye protection.
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SECTION IX – Physical and Chemical Properties

Appearance:	40MM round with black and gray ogive and opaque cartridge case
Decomposition Temperature:	N/A
Specific Gravity:	N/A
Bulk Density:	N/A
pH @ 250C:	N/A
Solubility in Water:	N/A
Volatiles, % by Volume:	N/A
Evaporation Rate:	N/A
Vapor Density:	N/A
Molecular Weight:	N/A
Odor:	None
Coefficient of Oil/Water Distribution:	N/A

Gel Head:

Chemical Name:	MED-4050 Part A
Chemical Family:	Silicone
Boiling Point:	149°F (65°C)
Freezing Point:	-40°F (-40°C)

SECTION X – Stability and Reactivity

Storage Conditions:	Store in a cool, dry area remote from all sources of ignition. Store these items with compatible hazard class (1.4) and storage group (C). Do not subject to mechanical shock.
Do Not Store at Temperatures Above:	150°F
<i>Product Stability and Compatibility:</i>	
Shelf Life Limitations:	Indefinite at 50–90°F and 35% relative humidity.



Incompatible Materials for Packaging: Package only in DOT approved containers.
 Incompatible Materials for Storage and Transport: N/A
 Storage Compatibility Group: C

SECTION XI – Toxicological Information

Warning Statements and Warning Properties: N/A
 Explosive Material: N/A

Human Threshold Response Data:

Odor Threshold: N/A
 Irritation Threshold: N/A
 Immediately Dangerous to Life or Health: N/A

Effects of Exposure to Decomposition By-products:

Respiratory: Acute: Minor irritation
 Chronic: May cause damage to blood and central nervous system

Dermal: Acute: Minor irritation
 Chronic: Minor irritation

Eye: Minor irritation

Ingestion: Acute: Not a viable route
 Chronic: Not a viable route

Medical Conditions Aggravated by Exposure: None known or reported

Interactions with Other Chemicals that Enhance Toxicity: None known or reported

Animal Toxicology:

Acute Toxicology: Inhalation LC 50: N/A
 Dermal LD 50: N/A
 Oral LD: N/A
 Irritation: N/A

Target Organ Toxicity: Acute: N/A
 Chronic: N/A

Teratogenicity: N/A
 Carcinogenicity: N/A
 Mutagenicity: Lead has been shown to affect fetal development

SECTION XII – Ecological Information

Emergency Planning and Community Right to Know Act (SARA Title III)

This mixture or trade name product may contain chemicals subject to reporting requirements established by SARA Title III. Please consult federal, state, and local regulations for the appropriate guidance.



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SECTION XIII – Disposal Considerations

Consult federal, state, and local regulations for disposal requirements.

SECTION XIV – Transport Information

This material is regulated as a DOT Hazardous Material.

U.N. Proper Shipping Name and Number: Cartridges for weapons, inert projectiles

U.N. Classification Code: 0339

Reference Number:

DOT Hazard Classification: 1.4S, PG-II

DOT Description/Commercial Name: BIP (Blunt Impact Projectile), 40mm

Reportable Quantity: N/A

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:	
Rail:	X	Bulk:	Non-Bulk:
Motor:	X	Bulk:	Non-Bulk:
Water:	X	Bulk:	Non-Bulk:
Air:	X	Bulk:	Non-Bulk:

Special Comments: Classification under 173.86 or 173.114, 49 CFR.

SECTION XV – Regulatory Information

Emergency Planning and Community Right to Know Act (SARA Title III)

This mixture or trade name product may contain chemicals subject to reporting requirements established by SARA Title III. Please consult federal, state and local regulations for the appropriate guidance.

SECTION XVI – Other Information

It is impossible to include warnings or approved methods for every conceivable situation. Additional information is available in the *Ordnance Safety Manual*, published by the U.S. Army Ordnance Department. Also available through The Institute of Makers of Explosives, 1575 Eye Street, NW, Suite 550, Washington, DC 20005, are the following publications: *Construction Guide for Storage Magazines*, (No. 1); *American Table of Distances*, (No. 2); *Suggested Code of Regulations for the Manufacture, Transportation, Storage, Sale, Possession, and Use of Explosives and Blasting Materials*, (No. 3); *Safety Guide for the Storage, Handling, and Use of Explosive Materials*, (No. 17); *For the Safe Transportation of Class C Commercial Detonators in a Vehicle With Other Certain Explosives*, (No. 22).

The information contained herein this Material Safety Data Sheet is believed to be accurate and reliable: however, no warranty either expressed or implied is made. Conditions under which this information may be applied are beyond Security Devices International’s (SDI) control and therefore SDI can assume no liability for results of its application. This product is designed to be used by persons having sufficient skill to make informed judgments regarding its application. Additionally, if this Material Safety Data Sheet is more than three years old, you should contact SDI at the phone number listed below to make certain that this sheet is current.

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Tampa, Florida 33609
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