



Security Devices International Inc.

Blunt Impact Projectile (S-1000 BIP)

Safety Data Sheet Version C-1

Last Updated: April 18, 2016



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, and ordinances. If, after carefully reading the information included in this Safety Data Sheet, 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" for further information below.

SECTION I – Identification

Product Name: 40MM BIP – Blunt Impact Projectile (S-1000 BIP)
 Product Use: 40mm Less-lethal Projectile
 Manufacturer: Security Devices International Inc.
 Address: 25 Sawyer Passway, Fitchburg MA 01420 USA
 Emergency Telephone Number: (978) 868-5011

SECTION II – Hazard Identification

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.
 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

Caution! Explosive. Keep away from heat. Do not subject to mechanical shock. Particles from firing may be harmful if inhaled. Do not take internally.

HMIS Rating: Health: 0 Flammability: 0 Explosive: 2

National Fire Protection Association (NFPA): Mixture. Not rated.

Human Threshold Response Data

Odor Threshold: Unknown

Irritation Threshold: Unknown

Immediately Dangerous to Life or Health (IDLH) Value(s): The IDLH for this product is not known. The IDLH for copper and lead is 100 mg/m³. The IDLH for nitroglycerin is 75 mg/m³. The IDLH for dibutyl phthalate is 4000 mg/m³.

SECTION III – Composition/Information on Ingredients

| | CAS # | Components | TWA (OSHA) |
|-------------|------------|-------------------|------------------------|
| Projectile: | 07631-86-9 | Silica, amorphous | 6 mg/m ³ |
| | 25038-54-4 | Polyamide Resin | 15 mg/m ³ |
| | 9003-53-6 | Polystyrene | 10 mg/m ³ |
| | 109-66-0 | Pentane | 1800 mg/m ³ |



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| | | | |
|----------|-------------|---------------------------------|------------------------|
| Varnish: | Proprietary | Oil Modified Polyurethane Resin | None |
| | 64742-88-7 | Mineral Spirits | 2000 mg/m ³ |
| | 8052-41-3 | Stoddard Solvent | 2900 mg/m ³ |
| | 96-29-7 | Methyl Ethyl Ketoxime | NA |
| | 112926-00-8 | Silicon Dioxide | None |

| | CAS # | Components | % By Weight | INECS/ ELINCS # | EU Classification | |
|----------------|------------|-----------------------|-------------|--------------------|-----------------------|-------------------------|
| | | | | | Symbol | R-Phrase |
| Powder Charge: | 7440-50-8 | Copper | 40-75 | 231-159-6 | None | None |
| | 7440-66-6 | Zinc | 20-35 | 231-175-3 | F (as dust of powder) | R15-17 |
| | 9004-70-0 | Nitrocellulose | 2-17 | Not listed | E* | R 2 |
| | 55-63-0 | Nitroglycerin | 1-3 | 200-240-8 | E, T+, N | R 3-26/27/28-33-51-53 |
| | 84-74-2 | Dibutyl phthalate | 0.2-3 | 201-55-74 | None | None |
| | 15245-44-0 | Normal Lead styphnate | 0.1-1 | 239-290-0 | E, T, N | R61-3-20/22-33-50/53-62 |

*This material is not listed in Annex 1 of Directive 88/379/EEC. SDI has classified the material according to the conventional method based upon information from similar materials.

OSHA REGULATORY STATUS: Explosive

SECTION IV – First Aid Measures

| | |
|-------------|--|
| 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-fighting Measures

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. |



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Primer Smokeless Powder Charge: 3.7 grains / 239.7560 mg

OSHA Regulatory Status: Explosive

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: 150°F. Avoid heat (confinement), stacking, and burning.

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 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 and Transport: N/A

Storage Compatibility Group: C

SECTION VIII – Exposure Controls and Personal Protection

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.

Protective Clothing Type: When applicable use protective clothing, including gloves, boots, and eye protection.

SECTION IX – Physical and Chemical Properties

Appearance:



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| | |
|--|--|
| Decomposition Temperature: | 40MM round with black and gray ogive and opaque cartridge case |
| Specific Gravity: | N/A |
| Bulk Density: | N/A |
| pH @ 25°C: | 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

| | |
|------------------------------------|----------------|
| Chemical Stability: | Stable |
| Incompatible/Materials to Avoid: | None |
| Hazardous Decomposition Products: | Will not occur |
| Hazardous Polymerization Products: | Will not occur |

SECTION XI – Toxicology 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 |



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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.

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

DOT Hazard Classification: 1.4 S

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:

Rail: X

Motor: X

Water: X

Air: X

Special Comments:

Packaging Quantities:

Bulk:

Bulk:

Bulk:

Bulk:

Classification under 173.86 or 173.114, 49 CFR.

Non Bulk:

Non Bulk:

Non Bulk:

Non Bulk:

SECTION XV – Regulatory Information

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



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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

Last Revision: April 18, 2016

Shelf Life: Five (5) Years

The information contained herein this Safety Data Sheet (SDS) 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 SDS is more than three years old, you should contact SDI at the phone number listed below to make certain that this sheet is current