SAFETY DATA SHEET
Replacement Squib Cartridge

1. IDENTIFICATION

Product Name	Replacement Squib Cartridge
Other Trade Names	Squib Charge
Product Numbers	83-844712-000, 83-897391-000
Recommended use of the chemical and restrictions on use	
Identified uses	Electro - pyrotechnic device
Restrictions on use	Not user serviceable. Do not attempt downloading or disassembling.
Company Identification	Kidde-Fenwal, Inc. 400 Main Street Ashland, MA 01721 USA
Customer Information Number	(508) 881-2000
Emergency Telephone Number	
CHEMTREC Number	(800) 424-9300 (703) 527-3887 (International)
Issue Date	April 10, 2015
Supersedes Date	February 9, 2012

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200)and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Explosives – Division 1.4

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Fire or projection hazard

Precautionary Statements

Prevention
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Ground/bond container and receiving equipment.
Do not subject to grinding/shock/friction.
Wear face protection.

2. HAZARD IDENTIFICATION

Response
In case of fire: Evacuate area.
Explosion risk in case of fire.
Do NOT fight fire when fire reaches explosives.
Fight fire with normal precautions from a reasonable distance.
Storage
Store in accordance with local regulations.
Disposal
Dispose of contents/container in accordance with local regulation.

Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture contained in a sealed device.

Component	CAS Number	Concentration
Cyclotrimethylenetrinitramine	121-82-4	NA
Diphenylamine	122-39-4	NA
Nitrocellulose	9004-70-0	NA
Potassium Perchlorate	7778-74-7	NA
Titanium	7440-32-6	NA

Note: Net reactive material content is 0.350 grams per unit.

4. FIRST- AID MEASURES

Description of necessary first-aid measures
Eyes
No specific treatment is required as exposure is unlikely under normal conditions of use.
Skin
No specific treatment is required as exposure is unlikely under normal conditions of use.
Ingestion
No specific treatment is required as exposure is unlikely under normal conditions of use.
Inhalation
No specific treatment is required as exposure is unlikely under normal conditions of use.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing agent appropriate to other materials involved. Keep containers and surroundings cool with water spray as containers may explode in the heat of a fire.

Specific hazards arising from the chemical
Do not fight fires involving explosives. Product may explode. Evacuate the area and allow to burn or fight fire remotely. May release toxic fumes during a fire.

Special Protective Actions for Fire-Fighters
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
If cartridges are spilled from their shipping or storage container and are damaged, cordon off the area until the situation has been properly assessed. Wear appropriate protective clothing to shield from accidental detonation.

Environmental Precautions
None

Methods and materials for containment and cleaning up
Recover the cartridges by hand and inspect in a shielded area before repacking. Dispose of damaged cartridges. If cartridge has ruptured: clean spill after liberally wetting down with solvent (acetone, butyl acetate or alcohol) by wiping material up with paper towel or cotton rag. Keep a fire extinguisher present.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Work with device in a shielded area, keep shunted until installed.

Conditions for safe storage
Keep away from friction, impact, heat, flame, radio transmitters, electric storms and electric currents, including those caused by static electricity. Store in original packaging at 70^{o}F. Keep away from other explosives. Do not disassemble cartridges as this may cause them to explode.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Cyclotrimethylenetrinitramine
ACGIH: TLV 0.5 mg/m^3 8h TWA. Danger of cutaneous absorption.
Diphenylamine
ACGIH: TLV 10 mg/m^3 8h TWA

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate engineering controls
Work with device in a shielded area. Keep shunted until installed.

Individual protection measures
Respiratory Protection
Not normally required.
Skin Protection
Cotton gloves
Eye/Face Protection
Chemical goggles or safety glasses with side shields.
Body Protection
Cotton clothing and conductive-soled shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Solid
Color	N/A
Odor	None
Odor Threshold	Not applicable
pH	Not applicable
Specific Gravity	Not applicable
Boiling Range/Point (°C/F)	Not applicable
Melting Point (°C/F)	Not applicable
Flash Point (PMCC) (°C/F)	Not applicable
Vapor Pressure	Not applicable
Evaporation Rate (BuAc=1)	Not applicable
Solubility in Water	Not applicable
Vapor Density (Air = 1)	Not applicable
VOC (g/l)	Not applicable
VOC (%)	Not applicable
Partition coefficient (n-octanol/water)	Not applicable
Viscosity	Not applicable
Auto-ignition Temperature	250 °F
Decomposition Temperature	No data available
Upper explosive limit	Not applicable
Lower explosive limit	Not applicable
Flammability (solid, gas)	No data available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical Stability
Stable under normal conditions but improper handling can result in accidental detonation.

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Exposure to low level electric current - impact - heat- static - shock - radio frequency (RF) energy

Incompatible Materials
None known

Hazardous Decomposition Products
Oxides of carbon – nitrogen oxides – hydrogen cyanide – hydrochloric acid – titanium oxides

11. TOXICOLOGICAL INFORMATION

This product is a sealed device preventing exposure to the components inside. The information below is applicable only if the cartridges rupture before use.
Acute Toxicity
Cyclotrimethylenetrinitramine: LD50 oral (rat) 100mg/kg
Diphenylamine: LD50 oral (rat) 2000 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure
Cyclotrimethylenetrinitramine: Causes damage to the central nervous system (route of exposure: oral)

Specific Target Organ Toxicity (STOT) – repeat exposure
Diphenylamine: May cause damage to organs (hematological system, kidneys, spleen, liver) through prolonged or repeated exposure (route of exposure: oral).
Cyclotrimethylenetrinitramine: May cause damage to organs (central nervous system) through prolonged or repeated exposure (route of exposure: oral).

Serious Eye damage/Irritation
Diphenylamine: Causes serious eye irritation.

Skin Corrosion/Irritation
No relevant studies identified.

Respiratory or Skin Sensitization
No relevant studies identified.

Carcinogenicity
No relevant studies identified.

Germ Cell Mutagenicity
No relevant studies identified.

Reproductive Toxicity
No relevant studies identified.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Cyclotrimethylenetrinitramine: LC50 Daphnia magna (Water flea) >15 mg/L/96 hr
Diphenylamine: LC50 Brachydanio rerio (Zebrafish) 2.2 mg/L/48hr

Mobility in soil
No relevant studies identified.

Persistence/Degradability
No relevant studies identified.

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
This material should be disposed of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment. Specific volumes, pressures or hardware configurations containing such materials can dictate various different hazard classifications for transportation and labelling requirements. Under Federal Regulations only trained and qualified individuals are permitted to label and ship products following the applicable Department of Transportation (DOT), Federal Aviation Administration (FAA), Transport Canada (TC), International Maritime Dangerous Goods (IMDG) or International Air Transport Association (IATA) requirements**.**

15. REGULATORY INFORMATION

United States TSCA Inventory
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory
All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization
Pressure Hazard (Explosive)

SARA Title III Sect. 313
This product contains the following chemicals listed in Section 313 at or above de minimis concentrations
Diphenylamine (122-39-4)

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS#: Chemical Abstracts Service Number
ECHA: European Chemicals Agency
EC50: Effect Concentration 50%
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date: April 10, 2015
Replaces: February 9, 2012
Changes made: Updated to GHS Classification.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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