

1. IDENTIFICATION

Product Name	93-191001-001 Electronic Initiator Assembly
Other Trade Names	Detonator
Recommended use of the chemical and restrictions on use	
Identified uses	Electric Detonator
Restrictions on use	Not user serviceable. Do not attempt disassembling.
Company Identification	Kidde-Fenwal, Inc. 400 Main Street Ashland, MA 01721 USA
Customer Information Number	(508) 881-2000
Emergency Telephone Number	
CHEMTEC Number	(800) 424-9300 (703) 527-3887 (International)
Issue Date	October 1, 2015
Supersedes Date	April 10, 2015

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
Pentaerythritol Tetranitrate	78-11-5	NA
Lead Azide	13424-46-9	NA
Lead Mononitrateresorcinat (LMNR)	51317-24-9	NA

Note: Device material content is less than 2 grams per unit. Detonators contain a fusehead with trace quantities of LMNR as the initiating material.

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

These detonators are designed to explode with great force. They may explode if subjected to high temperatures or fire. Do not fight fires involving explosives. 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 detonators 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 detonators by hand and inspect in a shielded area before repacking. Dispose of damaged detonators as described in Section 13. Suspect or damaged articles should be labeled and consigned for correct destruction.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing. Detonators should be stored in the packaging supplied until required for use. Follow industry guidelines for handling explosives.

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 in dry temperate conditions. Keep away from other explosives. Do not disassemble detonators as this may cause them to explode. The life of this product does not exceed 10 years from date of manufacture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Lead Azide, as Pb

ACGIH: TLV 0.05 mg/m³ 8h TWA.

OSHA: PEL 0.05 mg/m³ 8h TWA.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Lead Mononitrateresorcinat, as Pb

ACGIH: TLV 0.05 mg/m³ 8h TWA.

OSHA: PEL 0.05 mg/m³ 8h TWA.

Appropriate engineering controls

Work with device in a shielded area. If feasible, floors should be conducting.

Individual protection measures

Respiratory Protection

Not normally required.

Skin Protection

Cotton gloves and earthed wrist straps should be used if available.

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	No data available
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		No data available
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. Stable below 100°C.

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

Corrosive materials - copper tools - materials that can build up an electrostatic charge

Hazardous Decomposition Products

Oxides of carbon – nitrogen oxides – lead compounds

11. TOXICOLOGICAL INFORMATION

This product is a sealed device preventing exposure to the components inside. The information below is applicable only if the detonator ruptures before use.

Acute Toxicity

No relevant studies identified.

Specific Target Organ Toxicity (STOT) – single exposure

No relevant studies identified.

Specific Target Organ Toxicity (STOT) – repeat exposure

Lead Azide: May cause damage to organs through prolonged or repeated exposure. (route of exposure: inhalation)

Serious Eye damage/Irritation

No relevant studies identified.

Skin Corrosion/Irritation

No relevant studies identified.

Respiratory or Skin Sensitization

No relevant studies identified.

Carcinogenicity

Lead Azide: IARC 2A : Probably carcinogenic to humans, NTP: Anticipated Carcinogen

Lead Mononitrateresorcinat: NTP: Anticipated Carcinogen

Germ Cell Mutagenicity

No relevant studies identified.

11. TOXICOLOGICAL INFORMATION

Reproductive Toxicity

Lead Azide: May damage fertility or the unborn child (route of exposure: oral)

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Detonators are sealed and present no ecological hazard to the environment.

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 by a competent body familiar with explosive materials in accordance with all applicable local and national regulations. Ensure packaging is free of explosive material prior to disposal.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data

Detonators, Electric, 1.4B, PGII, UN0255

UN Proper Shipping Name

Detonators, Electric

UN Class

1.4B

UN Number

UN0255

UN Packaging Group

II

**Classification for AIR
Transportation (IATA)**

Consult current IATA Regulations prior to shipping by air.

**Classification for Water
Transport IMDG**

Consult current IMDG Regulations prior to shipping by water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains an ingredient that is not listed on the EPA Toxic Substance Control Act Chemical Substance Inventory.

Canada DSL Inventory

This product contains an ingredient that is not listed on the Domestic Substance List (DSL).

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:
Lead compounds

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: October 1, 2015

Replaces: April 10, 2015

Changes made: Update to Section 14.

Information Source and References

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

Prepared By:

EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Kidde-Fenwal, Inc. assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.