

# SAFETY DATA SHEET

Issue Date No data available

Revision Date 26-May-2016

Version 2

## 1. IDENTIFICATION

### Product Identifier

**Product Name** D60 Series & D80 Series (Electric Squib)

### Other Means of Identification

**SDS #** DLM-001

### Synonyms

D60-1/4, D60-1/2, D60-1, D60-2, D60-3, D60-6, D60-6M  
D80-1/32, D80-1/16, D80-1/8, D80-1/4, D80-1/2, D80-1, D80-2  
Micro Hits

### Recommended Use of the Chemical and Restrictions on Use

**Recommended Use** Electric squib and simulated bullet hits.

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

De La Mare Engineering, Inc.  
1910 First St.  
San Fernando, CA 91340

#### Emergency Telephone Number

**Company Phone Number** 1-818-365-9208  
**Emergency Telephone** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

### Classification

This product is hazardous to health only when it is detonated or the contents are released from the encapsulated device

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 2
Explosives	Division 1.4

### Signal Word

**Danger**

### Hazard Statements

Harmful if swallowed  
Harmful if inhaled  
May cause cancer  
May damage fertility or the unborn child  
May cause damage to organs through prolonged or repeated exposure  
Fire or projection hazard

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**Appearance** Chemical listed in section 3 loaded in small cylindrical containers, attached to insulated connecting wire and fully sealed with acrylic lacquer of various colors

**Physical State** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Do not eat, drink or smoke when using this product  
 Wash any exposed skin thoroughly after handling if exposed to internal chemical from damaged devices  
 Use only outdoors or in a well-ventilated area  
 Do not breathe dust or gas  
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 Do not subject to grinding/shock/friction  
 Ground/bond equipment and your person

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 IF SWALLOWED: Call a poison center or doctor/physician  
 Rinse mouth  
 In case of fire: Evacuate area  
 DO NOT fight fire when fire reaches explosives  
 Fight fire with normal precautions from a reasonable distance

**Precautionary Statements - Storage**

Store locked up  
 Store in accordance with local regulations

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC)**

Not Applicable

**Other Information**

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonyms**

D60-1/4, D60-1/2, D60-1, D60-2, D60-3, D60-6, D60-6M  
 D80-1/32, D80-1/16, D80-1/8, D80-1/4, D80-1/2, D80-1, D80-2  
 Micro Hits.

Chemical Name	CAS No	Weight-%
1,3-Benzenediol, 2,4,6-trinitro-, lead salt	15245-44-0	100

#### 4. FIRST AID MEASURES

##### First Aid Measures

<b>General advice</b>	If exposed or concerned: Get medical advice/attention.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Ingestion</b>	Drink plenty of water. Induce vomiting, but only if victim is fully conscious. Call a physician.
<b>Skin Contact</b>	Wash with soap and water.

##### Most Important Symptoms and Effects, both Acute and Delayed

<b>Symptoms</b>	Fatigue, insomnia, anorexia, malnutrition, constipation, abdominal pain, colic, blue gums, hypotension, and anemia. Lead will damage central nervous system, kidneys, blood, gingival tissues, and reproductive system.
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##### Indication of any Immediate Medical Attention and Special Treatment Needed

<b>Note to Physicians</b>	Treat symptomatically.
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#### 5. FIRE-FIGHTING MEASURES

##### Suitable Extinguishing Media

Water. Foam.

**Unsuitable Extinguishing Media** Not determined.

##### Specific Hazards Arising from the Chemical

High explosive contents-sensitive to friction, shock, heat, and electrostatic discharge. Radar and radio transmitters may set off non-shunted squibs.

**Hazardous combustion products** Lead fumes. Carbon monoxide. Nitrogen oxides (NOx). Ketones.

**Sensitivity to Mechanical Impact** Yes.

**Sensitivity to Static Discharge** Yes.

##### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Fight fire from an explosion resistant location.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal Precautions, Protective Equipment and Emergency Procedures

<b>Personal Precautions</b>	Use personal protective equipment as required. Remove all sources of ignition. Keep spill wet with water. Wear approved respirator.
<b>Other Information</b>	Anticipated release would only be from a damaged device.

**Environmental Precautions** See Section 12 for additional ecological information. Prevent runoff from entering drains, sewers or streams.

#### Methods and Material for Containment and Cleaning Up

**Methods for Containment** Prevent further leakage or spillage if safe to do so. Dike spill and prevent spill from entering sewers and waterways.

**Methods for Cleaning Up** Keep spill wet with water. Clean up in accordance with all applicable regulations.

### 7. HANDLING AND STORAGE

#### Precautions for Safe Handling

**Advice on Safe Handling** Do not cut or alter device. Do not remove squibs from protective package or open wire shunts until ready to use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protection recommended in Section 8. Do not eat, drink or smoke when using this product. Use only in well-ventilated areas. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Do not breathe dust or gas. Ground yourself and equipment to eliminate static electric sparks.

#### Conditions for Safe Storage, Including any Incompatibilities

**Storage Conditions** All storage magazines must be safely located, or approved design and securely locked. Do not store improperly with other explosives (severe physical injury or death may occur from detonation). Store in accordance with all state, local, and federal regulations.

**Incompatible Materials** Batteries. Storage cells. Strong acids. Acetylene. Chlorine.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,3-Benzenediol, 2,4,6-trinitro-, lead salt 15245-44-0	-	-	IDLH: 100 mg/m <sup>3</sup> Pb TWA: 0.050 mg/m <sup>3</sup> Pb

#### Appropriate Engineering Controls

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.

#### Individual Protection Measures, such as Personal Protective Equipment

**Eye/Face Protection** Face shield/goggles appropriate for high explosive handling.

**Skin and Body Protection** Coveralls and impervious boots if squib contents are spilled.

**Respiratory Protection** Not required for intact devices-use particulate respirator for damaged devices.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Use anti-static precautions such as personal grounding work on straps, grounded and conductive surfaces.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on Basic Physical and Chemical Properties

**Physical State** Solid

<b>Appearance</b>	Chemical listed in section 3 loaded in small cylindrical containers, attached to insulated connecting wire and fully sealed with acrylic lacquer of various colors	<b>Odor</b>	Odorless
<b>Color</b>	Orange-brown	<b>Odor threshold</b>	Not determined
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
pH	Not determined		
Melting point/freezing point	Explodes at 310 °C / 590 °F		
Boiling point/boiling range	Not applicable		
Flash point	270 °C / 518 °F	Detonates	
Evaporation rate	Not applicable		
Flammability (solid, gas)	Not determined		
Flammability limits in air			
Upper flammability limits	Not applicable		
Lower flammability limit	Not applicable		
Vapor pressure	Not applicable		
Vapor density	Not applicable		
Specific gravity	2.9-3.1	(1=Water)	
Water solubility	0.4%	@ 15 °C	
Solubility in other solvents	Not determined		
Partition coefficient	Not determined		
Autoignition temperature	Not determined		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic viscosity	Not determined		
Explosive properties	Not determined		
Oxidizing Properties	Not determined		

**Other Information****10. STABILITY AND REACTIVITY****Reactivity**

Not reactive under normal conditions

**Chemical Stability**

Unstable at 235°C.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Conditions to Avoid**

Static electricity. Heat. Impact. Mechanical shock.

**Incompatible Materials**

Batteries. Storage cells. Strong acids. Acetylene. Chlorine.

**Hazardous Decomposition Products**

Lead metal. Nitrogen oxides (NOx). Carbon monoxide. Ketones.

**11. TOXICOLOGICAL INFORMATION****Information on Likely Routes of Exposure**

<b>Product Information</b>	Product presents a hazard to health only when detonated or contents are released from encapsulated device
<b>Inhalation</b>	Harmful if inhaled.
<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Ingestion</b>	Harmful if swallowed.

**Component Information****Information on Physical, Chemical and Toxicological Effects**

**Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure**

**Carcinogenicity** May cause cancer.

Chemical Name	ACGIH	IARC	NTP	OSHA
1,3-Benzenediol, 2,4,6-trinitro-, lead salt 15245-44-0		Group 3	Reasonably Anticipated	X

*IARC (International Agency for Research on Cancer)*

*Group 3 IARC components are "not classifiable as human carcinogens"*

*NTP (National Toxicology Program)*

*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

**Reproductive toxicity** May damage fertility or the unborn child.

**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

**Numerical Measures of Toxicity- Product**

Not determined

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 500 mg/kg

ATEmix (inhalation-dust/mist) 1.5 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

**Persistence and Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Not determined.

Other Adverse Effects Not determined

**13. DISPOSAL CONSIDERATIONS**

Waste Treatment Methods

**Disposal of Wastes** Dispose of in accordance with federal, state and local regulations. Please contact manufacturer for more detailed disposal information.

**Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

Chemical Name	California Hazardous Waste Status
1,3-Benzenediol, 2,4,6-trinitro-, lead salt 15245-44-0	Ignitable Reactive Toxic

**14. TRANSPORT INFORMATION**

**Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances

**DOT** Please contact manufacturer for most current information

**IATA** Please contact manufacturer for most current information

**IMDG** Please contact manufacturer for most current information

**15. REGULATORY INFORMATION**

International Inventories

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances IECSC
- China Inventory of Existing Chemical Substances KECL -
- Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
1,3-Benzenediol, 2,4,6-trinitro-, lead salt - 15245-44-0	15245-44-0	Proprietary	1.0

SARA 311/312 Hazard Categories

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
1,3-Benzenediol, 2,4,6-trinitro-, lead salt 15245-44-0		X		



**US State Regulations**

Chemical Name	California Proposition 65
1,3-Benzenediol, 2,4,6-trinitro-, lead salt - 15245-44-0	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
1,3-Benzenediol, 2,4,6-trinitro-, lead salt 15245-44-0	X	X	X

**U.S. EPA Label Information**

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	Not determined	Not determined	Not determined	Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	Not determined	Not determined	Not determined	Not determined

Revision Date 01-Mar-2013

Revision Note

New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet