



Safety Data Sheet

DISPOSABLE PENLIGHTS

Section 1. Identification

Product Identifier	DISPOSABLE PENLIGHTS		
Synonyms	MDS131040; MSD_SDS0293		
Manufacturer Stock Numbers	MDS131040		
Recommended use	Supplying power for electronic products (e.g. electric torches, wireless mouse, radios, remote controllers, etc.)		
Uses advised against	Do NOT use it in an application which may contaminate food or do harm to human health.		
Manufacturer Contact Address	Medline Industries, Inc. One Medline Place Mundelein, IL, 60060 USA		
	Phone	Emergency Phone	Fax
	(800) 633-5463	(800) 424-9300 CHEMTREC	(847) 643-4436
	Website		
	www.Medline.com		

Section 2. Hazards Identification

Classification	No OSHA Hazard Classifications Applicable - Category N.A.
Signal Word	
Pictogram	
Hazard Statements	No OSHA Hazard Classifications Applicable
Precautionary Statements	
Response	N/A
Prevention	N/A
Storage	N/A
Disposal	N/A
Ingredients of unknown	0%

toxicity

Hazards not Otherwise Classified No Data Available

Note:

This product is generally not hazardous under normal conditions. But like any sealed container, battery may rupture when exposed to excessive heat and this could result in the release of flammable and irritating materials which may cause irritation to respiratory tract, skin and eyes.

Section 3. Ingredients

CAS	Ingredient Name	Weight %
12125-02-9	Ammonium chloride ((NH ₄)Cl)	1.12 %
7732-18-5	Water	15.6 %
9002-86-2	Ethene, chloro-, homopolymer	2.65 %
1313-13-9	Manganese oxide (MnO ₂)	24.8 %
7440-66-6	Zinc	32.6 %
1333-86-4	Acetylene black	5.4 %
7646-85-7	Zinc chloride (ZnCl ₂)	5.85 %
1333-86-4	Carbon black	6.7 %

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-Aid Measures

	Persons using this product should consult a physician or other medical professional if an accident involving this product results in injury. Specific first-aid measures are as follows (for contact with leakage from rupture):
Eye Contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
Skin Contact:	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If irritation persists, get medical attention.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician if you feel unwell.
Ingestion	Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention immediately if discomfort occurs.
Acute Effect and Delayed Effect:	Acute Effect: No acute effect under normal conditions. If contact with electrolyte, it can cause irritation to skin and eyes. Delayed Effect: Not found.
Personal Protective Equipment:	Wear protective gloves/protective clothing/eye protection/face protection when necessary.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media	Fire foam, carbon dioxide or dry chemical powder.
Unsuitable Extinguishing Media	Do not use water as this product contains zinc which may release flammable gas when contacting with water.
Special Fire Fighting Procedures:	Structural firefighters must wear self-contained breathing apparatus and full protective equipment.
Unusual Fire and Explosive Hazards:	If involved in a fire, these products may ignite or decompose. Products of thermal decomposition may include hazardous and irritating gases (e.g. carbon oxides, hydrogen chloride).
Special Fire Fighting Method:	For initial fire, use dry powder, carbon dioxide, etc. For large fire, it is effective to use fire foam, etc. to shut off air supply. Firefighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing). Deny unnecessary entry to the place around fire. Remove containers from fire area if it can be done without risk. Cool surrounding facilities, etc. with water spray. Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

Section 6. Accidental Release Measures

Personal Precautions:	Use proper personal protective equipment as indicated in Section 8.
Measures for Cleaning/Collection:	If this battery ruptures, do not touch the battery directly. Wear protective gloves and sweep up leakage carefully. Label the waste containers and dispose it in a proper way.
Environmental Precautions:	Keep collected waste out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.
Additional Information:	As for safe handling and storage, see Section 7. As for personal protection, see Section 8. As for waste disposal see Section 13.

Section 7. Handling and Storage

Handling	The regulations relating to storage remises apply to workshop where the product is handled: Do not breathe vapors or fumes that may be evolved during processing. Do not disassemble or burn batteries. Do not squeeze or pierce batteries. Do not put batteries into water. Workers must wear proper protective equipment and must operate strictly according to relative rules.
Information about fire - and explosion protection:	Keep ignition sources away - Do not smoke.
Storage:	Requirements to be met by storerooms and receptacles: Do not store near flame or incompatible materials. Keep battery terminals insulated when in storage or transportation. The temperatures in the storeroom must be controlled in a proper range. Avoid long-time direct contact of sunlight.
Information about storage in one common storage facility:	Not required.
Further information about storage condition:	None.

Section 8. Exposure Controls/Personal Protection

Occupational Exposure Limits	Ingredient Name	ACGIH TLV	OSHA PEL	STEL
	Ammonium chloride ((NH ₄)Cl)	N/A	N/A	N/A
	Water	N/A	N/A	N/A
	Ethene, chloro-, homopolymer	N/A	N/A	N/A
	Manganese oxide (MnO ₂)	N/A	N/A	N/A
	Zinc	N/A	N/A	N/A
	Carbon black	N/A	N/A	N/A
	Zinc chloride (ZnCl ₂)	N/A	N/A	N/A
	Carbon black	N/A	N/A	N/A
Personal Protective Equipment Engineering Controls:	N/A Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate vapour or fume, use ventilation to keep exposure to airborne contaminants below the exposure limit.			
Personal Protective Equipment:	Protection of Eyes: No special requirements under normal conditions. Wear safety glasses when working in a dusty condition. Protection of Hands: Recommend wearing protective gloves for industrial hygienic purpose. Respiratory Protection: No special requirements under normal conditions. Wear appropriate respirators when vapour or fume is generated from processing. Protection of Body: Recommend wearing working clothing made of anti-corrosion materials. General Protective and Hygienic Measures: Wash hands before breaks and at the end of work. Do not eat, drink, or smoke when using this product. Prevent vapour or fume from processing entering eyes.			

Section 9. Physical and Chemical Properties

Physical State	Solid
Color	Various colours
Odor	Odourless
Odor Threshold	No data available.
Solubility	No data available.
Partition coefficient Water/n-octanol	No data available.
VOC%	N/A
Viscosity	No data available.
Specific Gravity	1
Density lbs/Gal	N/A
Pounds per Cubic Foot	N/A
Flash Point	No data available.
FP Method	No data available.
Ph	No data available.
Melting Point	No data available.
Boiling Point	No data available.
Boiling Range	No data available.
LEL	N/A
UEL	N/A
Evaporation Rate	No data available.
Flammability	This product is not classified as a flammable solid
Decomposition Temperature	No data available.
Auto-ignition Temperature	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.

Section 10. Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures.
Possibility of Hazardous Reactions:	The electrolyte may react violently with strong oxidizing agents, strong acids, strong bases, reducers, and halogens.
Hazardous Decomposition or Byproducts:	Products of thermal decomposition can include produce hazardous and irritating gases and fumes (e.g. carbon oxides, hydrogen chloride, fumes of zinc and manganese).
Incompatibility (Materials to Avoid):	Strong oxidizing agents. Strong acids
Incompatibility (Materials to avoid):	Strong bases.
Incompatibility (Materials to Avoid)	Reducers. Halogens.
Conditions to avoid:	Avoid exposure or contact to extreme temperatures and combustible materials.

Section 11. Toxicological Information

Product Toxicity Data: The toxicity data of this product has not been determined, but to our best knowledge, this product is minimally toxic. Shown below is the toxicity data of some ingredients.

Component
Zinc CAS-No. 7440-66-6
LD50/LC50 (Median lethal dose)
>2,000 mg/kg (Oral, rat)
>5,410 mg/kg (Inhalation, dust)

Component
Manganese dioxide CAS-No. 1313-13-9
LD50/LC50 (Median lethal dose)
11,710 mg/kg (Oral, rat)

Component
Carbon Stick CAS-No. 1333-86-4
LD50/LC50 (Median lethal dose)
15,400 mg/kg (Oral, rat)

Component
Zinc Chloride CAS-No. 7646-85-7
LD50/LC50 (Median lethal dose)
1,150mg/kg (Oral, rat)
173 mg/kg (Dermal, guinea pig)

Component
Ammonium chloride CAS-No. 12125-02-9
LD50/LC50 (Median lethal dose)
1,650 mg/kg (Oral, rat)

Serious eye damage/Eye irritation: No relevant classification.

Skin corrosion/irritation: No relevant classification.

Respiratory/Skin Sensitizer: No relevant classification.

Germ cell Mutagenicity: No relevant classification.

Carcinogenicity: No relevant classification.

Reproductive Toxicity: No relevant classification.

Specific Target Organ Toxicity - Single exposure: No relevant classification.

Specific Target Organ Toxicity - Repeated exposure: No relevant classification.

Aspiration Hazard: No classification for this product.

Effects on or Via Lactation: No classification for this product.

Section 12. Ecological Information

Ecotoxicity:	No data available for the whole product. The data shown below is of the main ingredient. Ammonium Chloride CAS-No. 12125-02-9 96-hour LC50=0.696mg/L of fishes (Rainbow trout) (ECETOC TR91,2003). Zinc Chloride CAS-No. 7646-85-7 48-hour EC50=0.1mg/L of Crustacea (Daphnia magna) (CERI Hazard Data, 2002).
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
Mobility in soil:	As for the sealed batteries, it can hardly move in soil.

Section 13. Disposal

Do not throw it into any open bodies of water and sewage system. Do not dispose together with household wastes. Dispose of waste in accordance with applicable local, regional and international regulations and standards. When disposing, consult to a certified waste trader or local offices if they deal with the waste. Paste a label on the container indicating the possible hazards of waste.

Section 14. Transport Information

UN Number	N/A
UN Proper Shipping Name	Not Regulated
DOT Classification	Not Regulated
Packing Group	Not Regulated

It is not listed as dangerous goods by 55th edition-IATA DGR of International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO) and U.S. Department of Transportation (DOT) regulations, 49 CFR. These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in Special Provision A123 in the ICAO Technical Instructions and IATA Dangerous Goods Regulations and Special Provision 130 of the DOT.

These regulations require these batteries to be packed in such a way to prevent short circuits or generation of a dangerous quantity of heat.

In addition, the ICAO and IATA regulations require the words "Not Restricted" and "Special Provision A123" to be provided on the air waybill.

International Maritime Organization (IMO) does not regulate these batteries.

Section 15. Regulatory Information

SARA 311/312:	N.A.
SARA 302:	N.A.
SARA 313:	Zinc Zinc chloride
TSCA:	N.A.
CERCLA Hazardous Substance List:	AMMONIUM CHLORIDE Zinc. Zinc chloride
Clean Air Act (CAA) Section 112, 112 (r):	N.A.
New Jersey Right to Know Components:	AMMONIUM CHLORIDE ZINC CHLORIDE CARBON BLACK
Massachusetts Right to Know Components:	ETHENE, CHLORO-, HOMOPOLYMER AMMONIUM CHLORIDE ZINC CHLORIDE
Pennsylvania Right to Know Components:	AMMONIUM CHLORIDE ZINC CHLORIDE CARBON BLACK
Rhode Island Right to Know Components:	Zinc chloride fume CARBON BLACK

Section 16. Other Information

Revision Date 12/8/2016

Legend N.A. - Not Applicable
N.E. - Not Established
N.D. - Not Determined

HMIS (U.S.A.): Health Hazard

HMIS (U.S.A.): Flammability

HMIS (U.S.A.): Reactivity

National Fire Protection

Association (U.S.A): Health Hazard

National Fire Protection

Association (U.S.A):
Flammability

National Fire Protection

Association (U.S.A):
Instability Hazard

Additional Information

The information contained herein is furnished without warranty or legal responsibility of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees