

SAFETY DATA SHEET – 14-329

1. IDENTIFICATION

REVISION DATE: 1/3/2017

<p>PRODUCT IDENTITY: Lead Calcium Battery, Dry</p> <p>CDID: DCU, DJ, KCR, KCT, LCR, LCT, LCTII, LCY, MCT, XDJ, XTJ, XTR, XTH, AND XTL</p>	<p>Product Use: Electric Storage Battery</p> <p>Manufacturer/Supplier: C&D Technologies, Inc.</p> <p>Address: C&D Technologies, Inc. 1400 Union Meeting Road Blue Bell, PA 19422-0858</p> <p>Web Sites: www.cdtechno.com</p> <p>North America 24 Hour Emergency Telephone: (CHEM TEL) 1-800-255-3924 International 24 Hour Emergency Telephone: (CHEM TEL) 1-813-248-0585 C&D Technologies Inc. Telephone: 215-619-2700</p>
---	--

2. GHS HAZARDS IDENTIFICATION

Health	Environmental	Physical
Acute Toxicity (Oral/Dermal/Inhalation) - Category 4 Skin Corrosion/Irritation - Category 1A Eye Damage - Category 1 Reproductive - Category 1A Carcinogenicity (lead) - Category 1B Carcinogenicity (arsenic) - Category 1A Carcinogenicity (acid mist) - Category 1A Specific Target Organ Toxicity (repeated exposure) - Category 2	Aquatic Chronic 1 Aquatic Acute 1	Explosive Chemical, Division 1.3

GHS Label:

Health	Environmental	Physical
<p>Hazard Statements DANGER! Harmful if swallowed, inhaled, or in contact with skin. Acid causes severe skin burns and eye</p>	<p>Precautionary Statements Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat drink or smoke when using this product.</p>	

SAFETY DATA SHEET – 14-329

<p>damage. May damage fertility or the unborn child if ingested or inhaled. May cause harm to breast-fed children. May cause cancer if ingested or inhaled. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure if ingested or inhaled. Irritating to eyes, respiratory system, and skin. May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen). Explosive, fire, blast or projection hazard</p>	<p>Avoid contact during pregnancy/while nursing. Wear protective gloves/protective clothing, eye protection/face protection. Use only outdoors or in a well-ventilated area. Avoid contact with internal acid. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. No smoking IF SWALLOWED OR CONSUMED: rinse mouth. Do NOT induce vomiting. Call a poison center/doctor if you feel unwell. IF ON CLOTHING OR SKIN (or hair): Remove/Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed/concerned, or if you feel unwell seek medical attention/advice. Store locked up, in a well-ventilated area, in accordance with local and national regulation. Dispose of contents/container in accordance with local and national regulation Keep out of reach of children.</p>
--	---

3. *COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (Chemical/Common Names):	CAS No.:	% by Wt:
*Lead , Lead Compounds	7439-92-1	76
NON-HAZARDOUS INGREDIENTS		
Calcium	7440-70-2	<1
Inert Components	N/A	24
SECTION 313 (40 CFR 372) LISTED TOXIC CHEMICALS ARE PRECEDED BY AN *.		

4. FIRST AID MEASURES

INHALATION:

Remove from exposure, gargle, wash nose and lips; consult physician.

INGESTION:

Consult physician immediately.

SKIN:

Upon contact, wash immediately with soap and water.

EYES:

Upon contact, wash for at least 15 minutes with water.

5. FIRE FIGHTING MEASURES

Flash Point: Not Applicable

Flammable Limits: LEL = 4.1% (Hydrogen Gas in air); UEL = 74.2%

SAFETY DATA SHEET – 14-329

Extinguishing media: Class ABC or CO2. Do not use carbon dioxide directly on cells as the thermal shock may cause cracking or the battery case. Avoid breathing vapors. Use appropriate media for surrounding fire.

Fire Fighting Procedures:

Use positive pressure, self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products:

Highly toxic lead oxide fumes may evolve from heated metal.

6: ACCIDENTAL RELEASE MEASURES

Does not apply with no electrolyte in battery.

7. HANDLING AND STORAGE**Handling and Storage:**

Store in cool, dry area away from flames, sparks, and oxidizers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Limits (mg/m³)** Note: N.E. = Not Established

INGREDIENTS (Chemical/Common Names):	OSHA PEL	ACGIH	US NIOSH	Quebec PEV	Ontario OEL	EU OEL
Lead, Lead Compounds	0.05	0.05	0.05	0.05	0.05	0.15 (b)

(b)As inhalable aerosol

Engineering Controls (Ventilation):

Store and handle in well-ventilated area.

Respiratory Protection (NIOSH/MSHA approved):

None required under normal conditions. .

Skin Protection:

None required under normal conditions. Nitrile gloves are recommended..

Eye Protection:

Safety glasses with side-shields.

Other Protection:

None required under normal conditions.

SAFETY DATA SHEET – 14-329**9. PHYSICAL AND CHEMICAL PROPERTIES**

Properties Listed Below are for Electrolyte:			
Boiling Point:	N/A	Specific Gravity (H ₂ O = 1):	1
Melting Point:	N/A	Vapor Pressure (mm Hg):	N/A
Solubility in Water:	N/A	Vapor Density (AIR = 1):	N/A
Evaporation Rate: (Butyl Acetate = 1)	Less than 1	% Volatile by Weight:	N/A
Appearance and Odor:	Manufactured article; no apparent odor. Formed lead dioxide is dark brown in color with a slight acidic odor.		

10. STABILITY AND REACTIVITYStability: Stable X Unstable ___

This product is stable under normal conditions at ambient temperature.

Conditions to Avoid: Prolonged overcharge at high current; sources of ignition.**Incompatibilities:** (materials to avoid)

Avoid contact with conductive metals and organic solvents.

Hazardous Decomposition Products:

Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

Hazardous Polymerization:

Will not occur

11. TOXICOLOGICAL INFORMATION**Routes of Entry:**

Hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapor or fume. The presence of nascent hydrogen may generate highly toxic arsine gas.

Inhalation:

Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

Ingestion:

Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician.

Skin Contact:

Not absorbed through the skin.

SAFETY DATA SHEET – 14-329

Eye Contact:

May cause eye irritation.

Effects of Overexposure - Acute:

Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

Effects of Overexposure - Chronic:

Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in males and females. Repeated exposure to lead and lead compounds in the workplace may result in nervous system toxicity. Some toxicologists report abnormal conduction velocities in persons with blood lead levels of 50 µg/100 ml or higher. Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues.

Carcinogenicity:

Lead is listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.

Medical Conditions Generally Aggravated by Exposure:

Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

Acute Toxicity:

Inhalation LD50:

Acute Toxicity Point Estimate = 4500 ppmV (based on lead bullion)

Oral LD50:

Acute Toxicity Estimate (ATE) = 500 mg/kg body weight (based on lead bullion)

Additional Health Data:

All heavy metals, including the hazardous ingredients in this product, are taken into the body primarily by inhalation and ingestion. Most inhalation problems can be avoided by adequate precautions such as ventilation and respiratory protection covered in Section 8. Follow good personal hygiene to avoid inhalation and ingestion: wash hands, face, neck and arms thoroughly before eating, smoking or leaving the work site. Keep contaminated clothing out of non-contaminated areas, or wear cover clothing when in such areas. Restrict the use and presence of food, tobacco and cosmetics to non-contaminated areas. Work clothes and work equipment used in contaminated areas must remain in designated areas and never taken home or laundered with personal non-contaminated clothing. This product is intended for industrial use only and should be isolated from children and their environment.

The 19th Amendment to EC Directive 67/548/EEC classified lead compounds, but not lead in metal form, as possibly toxic to reproduction. Risk phrase 61: May cause harm to the unborn child, applies to lead compounds, especially soluble forms.

SAFETY DATA SHEET – 14-329

12. ECOLOGICAL INFORMATION

Environmental Fate: lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead.

Environmental Toxicity: Aquatic Toxicity:

Lead: 48 hr LC50 (modeled for aquatic invertebrates): <1 mg/L, based on lead bullion

Additional Information

- No known effects on stratospheric ozone depletion.
- Volatile organic compounds: 0% (by Volume)
- Water Endangering Class (WGK): NA

13. DISPOSAL CONSIDERATIONS (UNITED STATES)

Spent batteries: Send to secondary lead smelter for recycling. Spent lead calcium batteries are not regulated as hazardous waste when the requirements of 40 CFR Section 266.80 are met. EPA hazardous waste number for lead is D008.

Following local, State/Provincial, and Federal/National regulations applicable to end-of-life characteristics will be the responsibility of the end-user.

14. TRANSPORT INFORMATION

United States:

Wet, non-spillable batteries do not need to be shipped and transported as fully-regulated Class 8 Corrosive hazardous materials / dangerous goods when tested, packaged and marked in accordance with the following regulations:

U.S. Hazardous Materials Regulations: 49 CFR 173.159(f) and 49 CFR 173.159a

- The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests found in 49 CFR 173.159(f) and “rupture test” found at 49 CFR 173.159a;
- When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with 49 CFR 173.159a; and
- The batteries and outer packaging must be marked NON-SPILLABLE BATTERY or NON-SPILLABLE as required by 49 CFR 173.159a

IATA Dangerous Goods Regulations: Packing Instruction 872 and Special Provision A67

- The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests found in Packing Instruction 872 and “rupture test” found in Special Provision A67 of the International Air Transport Association (IATA) Dangerous Goods Regulations

SAFETY DATA SHEET – 14-329

- When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision A67.
- The words “Not Restricted” and “Special Provision A67” must be included in the description of the substance on the Air Waybill when an Air Waybill is issued.

IMDG Code: Special Provision 238.1 and 238.2

- The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests and “rupture test” found in Special Provision 238.1 and 238.2.
- When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision 238.1 and 238.2.

If the regulations listed above are not met, then Batteries, wet, nonspillable (UN2800) are regulated as Class 8 Corrosive hazardous materials / dangerous goods by the U.S. Department of Transportation (DOT) and international dangerous goods regulatory authorities pursuant to the IATA Dangerous Goods Regulations and IMDG Code.

15. REGULATORY INFORMATION

UNITED STATES:

EPCRA Sections 302, 304, 311 & 312

Lead-acid batteries do **NOT** meet the OSHA definition of an "article" (US EPA, Oct. 1998). The lead that compose these batteries must be included when determining the various thresholds for these EPCRA section regulations.

The lead used in lead-calcium batteries does not qualify for any OSHA or EPCRA exemptions. Lead is not an EHS, and the following table outlines the applicable EPCRA Sections and their respective thresholds for **lead**:

EPCRA Sections - Lead	Thresholds
311 - MSDS Reporting	≥ 10,000 lbs.
312 - Chemical Inventory Reporting (i.e. Tier II)	≥ 10,000 lbs.

EPCRA Section 313

The reporting of lead in lead-calcium batteries used in cars, trucks, most cranes, forklifts, locomotive engines, and aircraft for the purposes of EPCRA Section 313 is not required. Lead-acid batteries used for these purposes are exempt for Section 313 reporting per the "Motor Vehicle Exemption." See page B-22 of the U.S. EPA Guidance Document for Lead and Lead Compound Reporting under EPCRA Section 313 for additional information of this exemption.

SAFETY DATA SHEET – 14-329**TSCA:**

TSCA Section 8b – Inventory Status: All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

TSCA Section 12b (40 CFR Part 707.60(b)) No notice of export will be required for articles, except PCB articles, unless the Agency so requires in the context of individual section 5, 6, or 7 actions.

TSCA Section 13 (40 CFR Part 707.20): No import certification required (EPA 305-B-99-001, June 1999, Introduction to the Chemical Import Requirements of the Toxic Substances Control Act, Section IV.A)

RCRA: Spent Lead Calcium Batteries are subject to streamlined handling requirements when managed in compliance with 40 CFR section 266.80 or 40 CFR part 273. The EPA hazardous waste number for lead is D008.

STATE REGULATIONS (US):***Proposition 65 Warning**

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

*Battery companies not party to the 1999 consent judgment with Mateel Environmental Justice Foundation should include a Proposition 65 Warning that complies with the current version of Proposition 65.

INTERNATIONAL REGULATIONS:

Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2).

Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.

16. OTHER INFORMATION

NFPA Hazard Rating:

Flammability (Red) = 0

Health (Blue) = 0

Reactivity (Yellow) = 0

MSDS Preparation/Review Date: 1/3/2017
Prepared by: W. E. Kozlowski – Director EHS

Revision: 2