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MATERIAL SAFETY DATA SHEET

Nickel Cadmium Industrial Storage Battery Fiber, Pocket and Bonded Electrode Types

Standby Power LLC
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For Chemical Emergency
Spill, leak, fire, exposure or accident
Call day or night CHEM-TEL
1-800-255-3924

Product: Nickel cadmium fiber plate alkaline rechargeable storage battery
Trade name: Standby Power
Designation: Battery types KFL, KFM, KFH and KFX
KBL, KPL, KBM, KPM, KBH and KPH
KSL, KSM and KSH

HMIS RATINGS Health: 3 Flammability: 1 Reactivity: 0
(Rating Codes: 0 = Insignificant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme)

1. HEALTH HAZARD INFORMATION

Effects of Overexposure:

- Eyes** Electrolyte solution inside battery coming in contact with eyes causes very rapid and severe damage and may cause permanent blindness.
- Skin** Electrolyte solution inside battery coming in contact with skin may cause serious burns to skin tissues. Contact with nickel compounds may result in chronic eczema or nickel itch.
- Ingesting** Ingestion of electrolyte solution will cause tissue damage in throat, respiratory or gastrointestinal tracts. Ingestion of nickel and/or cadmium compounds will cause nausea and intestinal disorders.
- Inhaling** Inhaling cadmium compounds may cause dry throat, cough, vomiting, chest pain, headache and/or chills. Excessive overexposure may result in breathing difficulty, pulmonary edema and prostration. When batteries are shipped dry, activation mists generated may cause irritation to the nasal mucous membranes and/or respiratory tract tissues and may damage lung tissues.
- Carcinogens** NIOSH recommends that both nickel and cadmium be treated as occupational carcinogens.

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2. EMERGENCY FIRST AID

Battery Electrolyte (18–20% solution of potassium hydroxide (KOH) in water)

Eyes	Flush with water for at least 20 minutes and get immediate medical attention
Skin	Remove any contaminated clothing and flush with water for at least 20 minutes
Ingesting	Give large volumes of milk or water and get immediate medical attention. Do not induce vomiting.
Inhaling	Give oxygen or fresh air using artificial respiration if necessary. Get immediate medical attention.

Cadmium and nickel compounds

Skin	Wash with soap and cold water
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3. REACTIVITY DATA

Never use acid in or around battery

Normal reactions inside battery liberate potentially flammable and explosive hydrogen gas. Do not seal battery in a non-ventilated enclosure.

Trichlorethylene reacts with electrolyte and combusts spontaneously.

Do not allow electrolyte to come in contact with organic chemicals or metals such as zinc, aluminum or tin. Hazardous toxic cadmium oxide fumes may be released if battery is incinerated.

4. FIRE AND EXPLOSION HAZARDS

Case material	Polypropylene
Melting point	279 F
Auto Ignition	1022 F

Extinguishing Mat'l Sand, carbon dioxide, dry chemical

Cadmium fumes may be released when batteries are subjected to high temperatures. In case of fire, do not breath smoke or fumes. USE APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND WEAR FULL PROTECTIVE CLOTHING.

Electrolyte solution reacts with zinc, aluminum, tin and other active materials releasing flammable hydrogen gas.

Disconnect or cut all cables to and from battery immediately.

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5. SPECIAL PROTECTION

Batteries should be operated only in well-ventilated areas where hydrogen gas cannot accumulate.

Use eye goggles or face shield whenever handling or working on batteries.

Wear rubber gloves, rubber apron and rubber boots when working with or around electrolyte.

6. INGREDIENTS

<u>(Hazardous)</u>	<u>Quantity</u>	<u>Exposure Limits (OSHA)</u>	<u>CAS#</u>
Nickel (including nickel hydroxide)	9%	1 mg/cubic meter	7440-020 1205-4487
Cadmium (including cadmium hydroxide)	6%	.005 mg/cubic meter	7440-439 21041-952
Cobalt (as hydroxide)	<0.2%	0.1 mg/cubic meter	7440-484
Electrolyte solution (KOH 18-20%)	30%	None established	1310-583
Polypropylene (container)	10%	None established	
Lithium hydroxide	< 1%	None established	1310-663

7. SPILL MANAGEMENT

Small electrolyte spills (up to 5 gallons): Flush with water and neutralize with weak acid solution.

Large electrolyte spills: Contain electrolyte in holding area or in containers. Recover electrolyte with vacuum truck and dispose of properly. Do not allow electrolyte or battery parts to enter sewers, streams or storm drains. (Reportable quantity 40 CFR-117.13 1000 pounds)

8. PRECAUTIONS

Keep sparks and open flames away from batteries.
Do not transport wet batteries without first sealing the vents.

Batteries are capable of extremely dangerous high short circuit currents. Caution should be exercised in handling and connecting batteries.

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When moving or taking batteries out of service, inspect for leaks before handling. If any cells are leaking, refer to SPILL MANAGEMENT.

9. EPCRA REPORTING REQUIREMENTS

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR372)

<u>CAS#</u>	<u>Chemical</u>	<u>Weight (per cent)</u>
7440-020	Nickel	9%
7440-439	Cadmium	6%
7440-484	Cobalt	0.2%

10. DISPOSAL

These batteries including the electrolyte solution are considered corrosives. If they are not recycled they must be disposed of in accordance with all federal, state and local hazardous waste regulations.

These batteries are considered by the RCRA to be universal wastes and should be returned to an approved recycler. Contact Standby Power for further information.

11. TRANSPORTATION

When shipping batteries they should be shipped as Hazardous Materials and described as follows:

BATTERIES, WET, FILLED WITH ALKALI, 8, UN2795, PGIII

Disclaimer:

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