

INDUSTRIAL NICKEL-CADMIUM BATTERY SAFETY DATA SHEET

1. IDENTIFICATION

1.1. Product

1.1.1. Name of product

Nickel-cadmium battery (rechargeable, open and with alkaline electrolyte)

1.1.2. Nombre comercial

4R20 4NDJFML

2. DANGERS

In normal conditions of use, the materials that make up the electrodes and electrolyte are within the element. Be careful when handling to avoid spilling of electrolyte from the elements and also during filling or emptying of these. Also refer to safety data sheets for information on the electrolyte.

Electrolyte.

- is harmful if swallowed;
- causes severe burns

3. COMPOSITION

3.1. Dangerous substances: element of full battery with electrolyte: loaded elements

Name	Quimic Product	Number EINECS	Number CAS	Conc. % weight	Symbol	Identification Danger	Risks (phrases R)
Niquel Oxihidroxid	NiOOH			5-15			
Cadmi	Cd	231-152-8	7440-43-9	4-13	Carc. Cat. 2 Muta. Cat. 3 Repr. Cat. 3 T+ N	Very Toxic. Dangerous for ambient.	R45, R26, R48/23/25, R62, R63, R68, R50/53
Potassium Hidroxid	KOH	215-181-3	1310-58-3	5-7	The electrolyte Apt 3.2.		

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3.2. Dangerous substances: only electrolyte

Name	Quimic Product	Number EINECS	Number CAS	Conc. % weight	Symbol	Danger Identify	Risks (phrases R)
Potassium Hidroxid	KOH	215-181-3	1310-58-3	18-30	C	Corrosivo	R22, R35
Liti Hidroxid	LiOH	215-183-4	1310-65-2	1-2,5	Sin clasificar		

4. FIRST AID

In case of contact with the electrolyte:

4.1. Inhalation

- Fresh air.
- Wash your mouth and nose with water.
- Medical treatment.

4.2. Skin contact

- Wash immediately with plenty of water.
- Medical treatment.

4.3. Eyes contact

- Wash immediately with plenty of water for at least 15-30 minutes.
- Move immediately to the injured person to the hospital.

4.4. Ingestion

- If the victim is fully conscious, please drink plenty of water.
- Do not induce vomiting.
- Immediately move him to the hospital so that you receive assistance.

5. IN CASE OF FIRE

5.1. Extinction

- Use chemicals dry of class D and/or sand.
- No water used.

5.2. Special Explosion Risks

- If the element overheats due to an external source or an internal short circuit, it could release vapors of potassium hydroxide or hydrogen gas.
- In case of fire, gases containing compounds of cadmium or nickel could be generated. Inhalation of gases causes serious damage to health.

5.3. Personal Protective Equipment

- Use a self-contained breathing apparatus and protective clothing against fire.

6. IN CASE ACCIDENTAL LIBERATION

- Wash the spillage of electrolyte with plenty of water.
- Take precautions: risk of slipping.

7. HANDLING AND STORAGE

- Electrolyte-filled elements must handle and keep with the upward ventilation valves.
- Store the battery in a dry place.

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8. CONTROL OF PERSONNEL EXPOSURE/PROTECTION

- In normal conditions of use, it is not necessary to use any special protection.
- When handling parts having leaks or to empty them or fill them with electrolyte, use safety glasses and protective gloves.

9. PHYSICALS PROPERTIS

- Physical form and color according to supply.

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

- From the point of view of health and safety, avoid temperatures higher than 85 ° C.
- Do not short-circuit the connections of the electrodes.
- Avoid deformation or the crushing of the elements.

10.2. Materials to avoid

- Do not fill the elements with acid electrolyte, e.g.. lead-acid battery.

11. TOXIC INFORMATION

11.1. Heavy Toxicity

11.1.1. Electrolyte

Potassium Hidroxid	LD50/oral/rata: 365 mg/kg
Liti Hidroxid	There are no data available

11.1.2. Gases containing cadmium compounds:

Cadmi Oxid	LD50/oral/rata: 1,3 mg/m ³ (30 minutes) Cadmi Oxid
	LD50/oral/ratón: 0,7 mg/m ³ (30 minutes)

11.2. Health Hazards

- Contact with the skin may cause serious injury.
- Contact with the eyes causes severe damage immediately. Risk of permanent injury.
- In general, the ingestion causes serious injury. Risk of permanent injury.

12. ENVIROMENT INFORMATION

Not available for batteries.

Electrolyte: The sharp increase in pH may affect fish, plankton and stationary bodies. If it is not neutralized, the product may be toxic to aquatic organisms due to the alkalinity.

13. REFUSE CONSIDERATIONS

- Like all systems of batteries, NI-CD elements should be collected in an area separate from other waste and must be recycled. Please contact your local dealer for more information.
- Do not incinerate never elements of NI-CD.
- Never do not dispose of NI-CD items in landfills.

European Union: The management of the product at the end of its useful life must be in accordance with Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators and their transposition into each national legislation of the Member States of the European Union. Please contact your national or local environmental agencies for more details.

A network for the collection and recycling of industrial NI-CD batteries for disposal has been established.

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14. TRANSPORT INFORMATION

14.1. United Nations

- N.º ONU: 2795

14.2. International Conventions

- Air: IATA
- Sea: IMDG
- Land: ADR (road) o RID (train). The batteries are exempted in accordance with the special paragraph No. 598.

N.º ONU	NAME	TRAIN & ROAD (ADR)				SEA (IMG)					AIR (IATA)			
		CL	Code	Package Group	Labeled	CL	Risks	EmS	Package Group	Labeled	CL	Risks	Package Group	Labeled
2795	WET-CELL BATTERIES FILLED WITH ALKALI Electric Storage	8	C 11	None	None	8	***	F-A, S-B	None	8	8	None	***	8

15. REGULATORY INFORMATION

15.1. Marked Product (UE)



Cd

15.2. Marked Product (EE, UU.)

The mandatory marking by law consists of the symbol of the three arrows in cycle, the NI abbreviation and the phrase "BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY" (the battery must be recycled or disposed of properly).

16. OTHER INFORMATION

16.1. Risks Phrases

R22	Harmful if ingestion.
R26	Very toxic by inhalation.
R35	Causes severe burns.
R45	May cause cancer.
R62	Possible risk of impaired fertility.
R63	Possible risk of adverse effects to the fetus pregnancy.
R68	Possibility of irreversible effects.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R48/23/25	Toxic: risk of serious damage to the prolonged exposition, inhalation or ingestion.

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