WAMTECHNIK
ENERGY FOR IDEAS

Operating rules for cells and batteries in non-rechargeable alkaline technology LR (1,5V and 9V)

Cells in alkaline technology LR are high-energy products. Incorrect handling may result in energy release in a short time by short circuit, cell unsealing and release highly harmful substances!

Alkaline cells are industrial products designed for professional use with appropriate processing and electrical connection technology. Under no circumstances should they be sold to users who do not know the basic principles of their use and are therefore exposed to **potential personal injury** and **damage to the property** (e.g. short circuit, burn, cell unsealing, caustic or poisonous substances release).

It is absolutely necessary to comply with these Operating Rules and to use the cells only in accordance with the parameters contained in the cell's Data Sheets issued by cell's Manufactures. The information contained therein defines permissible electrical parameters and has direct impact on the SAFETY of alkaline cells and batteries usage.

SAFETY RECOMMENDATIONS

Alkaline cells and batteries should be used only in accordance with the manufacturer's cell Data Sheet.

In particular:

- It is forbidden to charge the alkaline cells. It may cause cells damage, unsealing (even explosive) with caustic or poisonous substances release, or burn.
- It is forbidden to short-circuit the battery +/- poles due to the risk of high-current flow, cell damage, cell unsealing and caustic or poisonous substances release, personal injury to the user and fire threat to the property.

ATTENTION: Inserting the cell(s) into a pocket with keys or other metal parts can cause short circuit or person's burn.

- Do not subject the cells to excessive electrical stress (excessive discharge current) due to the risk of damage, overheat or cell unsealing with caustic substances release!
- Under no circumstances should the cells and batteries be used in reverse polarity.

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Dane rejestrowe:
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- Do not allow cells to be heated up above +60°C. Risk of unsealing and caustic substances release.
- Neither cells nor batteries must be thrown into fire or water.
- Do not subject the cells to mechanical shocks, drop or fall, vibrations or mechanical pressure.
- Always store cells out of the reach of unauthorized persons, especially children.
- It is not allowed to repair, disassemble and deform the cells or battery packs.
- Soldering cables to the surface of cells and batteries is prohibited. Risk of overheating, parameters loss or cell unsealing.
- Do not touch any liquid or substance which leaks from the cell. A leaking cell must be disposed of (see section of this document entitled „Disposal and recycling"). In the event of contact of liquid with the eyes, do not rub the eyes. Immediately start rinsing the eyes with water and continue for at least 15 minutes, lifting the upper and lower eyelids until all traces of liquid have disappeared. Then get medical attention.
- Alkaline cells and batteries should be disposed of (recycling) after consumption. Disposal of cells and batteries should be made in designated places. Do not dispose them of in municipal waste landfills.

INSTALLING AND USAGE OF ALKALINE CELLS

Besides the explicitly labelled consumer products, industrial alkaline cells may be installed by qualified persons with technical knowledge in the field of safe usage.

Appropriate tools must be used to assure safe and secure connection of cells and their connection to the device.

ATTENTION: Failure to comply with these rules, attempting to install, repair or run alkaline cells and batteries, making changes in product design by unauthorised and unqualified individuals can jeopardize the user and result in loss of warranty.

GENERAL INFORMATION

Alkaline cells provide good performance when used in accordance with the cell manufacturer's guidelines.

Alkaline technology is characterised by relatively low self-discharging, allowing for a few years storage and stable operation in reasonable period of time.

Alkaline cells and batteries naturally slowly lose their parameters, and self-discharge during usage and storage.

A typical estimated lifetime of alkaline cells and batteries is up to 5 years, depending on power profile and powered device.

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Do not leave alkaline cells unattended for a long time, above 1 year, both in the product being powered and during storage. If the alkaline cell or battery is not used for a long time, check its voltage level. In case of voltage lower than 1,0V/cell, such cell must be disposed of.

Check the status and voltage level of alkaline cells. The instructions for using the alkaline cells or batteries-powered device usually contain information on how to check the cells status as well as instructions on how to exchange them. Always follow the instructions supplied with the products and battery Data Sheet guidelines.

USAGE AND MAINTENANCE OF ALKALINE CELLS

It is forbidden to charge the alkaline cells. Risk of cells damage, unsealing (even explosive) with caustic or poisonous substances release, and possible user's burn.

DISCHARGING

The range of parameters for discharging alkaline cells specified by the Manufacturer must not be exceeded (cell's Data Sheets). Exceeding the maximum operating parameters may cause cell unsealing and overheating. It may result a harmful substances release and possible user's burn.

- Do not exceed allowed ranges of discharge (operational) current and end-discharge voltage (cut-off voltage) specified in the cell Data Sheet.
- Do not exceed allowed operational temperature ranges of the cells.

STORAGE

1. Alkaline cells and batteries should be stored in manufacturer's packaging or other packaging ensuring electrical insulation and tightness not less than that of the cell manufacturer.
2. Do not store alkaline cells and batteries under the direct sun exposure.
3. Alkaline cells and batteries must be stored not connected to any electrical circuit.
4. Unused alkaline cell or battery slowly self-discharges, therefore it is recommended to check periodically the level of voltage/ state of charge during long-term storage.
5. A brand new alkaline cell or battery can be stored for a maximum 2 years without losing performance under the recommended optimal temperature and humidity conditions. Maintenance activities are not required in the first cycle of storage.
6. Long-term storage is possible provided that the parameters of the cells are regularly inspected and possible maintenance activities. It is recommended to check the battery's voltage when it is stored for a longer

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time. In case of voltage <1,0V, cells can not be used and stored, disposal is recommended. When stored in higher temperature, verifying activities should be made after a shorter period of storage.

Recommended storage conditions:

Storage temperature:	+10°C - +25°C (recommended)
Relative humidity:	< 70% , no condensations on cells and/or packaging
General coditions:	Dry, cool and clean room, in particular free from corrosive agents. Cells in the manufacturer's factory packaging (or similar), ensuring good insulation and protection.

At temperature higher than +25°C, chemical self-discharge and aging processes occur faster. Avoid storage at higher temperatures.

Do not store or use deeply discharged alkaline cells and batteries. Used alkaline cells are considered as hazardous waste. (see „Disposal" below).

TRANSPORT

Transport of cells and batteries is regulated by safety rules.

Before transporting the alkaline cells and batteries, check the local, national and international regulations in force. The easiest way is to order transport to a professional transport company with documented authorization for dangerous goods transport.

Used (discharged) alkaline cells are considered as hazardous waste. Transport of a used (withdrawn from usage) alkaline cells and batteries, defective or withdrawn from the market, may in some circumstances be clearly restricted or prohibited.

WASTE PREVENTION AND BATTERY WASTE MANAGEMENT

Alkaline cells and battery packs are subject to disposal and recycling regulations that vary by country and region. Used cells or battery packs are considered hazardous waste. Before disposing of any cell or battery pack, check and comply with applicable regulations. To dispose of batteries, contact your local battery recycling facility. Alkaline cells and battery packs can be returned to the supplier (who places the cells on the

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market in the EU country), who will accept them free of charge and forward them to a battery recycling facility.

The most important measure to prevent or reduce waste generation is proper battery design, which ensures maximum battery life and the possibility of reuse in a second-life cycle, allowing for easier recycling. It is also crucial to be aware that following the User Manual affects battery life, allowing the user to maximize its useful life and thereby reduce (slow down) the generation of battery waste.

Under no circumstances should alkaline cells and battery packs be disposed of in standard municipal waste. Recycling allows for significant recovery of the raw materials from the cells and their further use. To simplify recycling and treatment, alkaline cells and battery packs should not be mixed with other used batteries.

Discharged cells should only be placed in collection containers. To prevent short circuits, protect the leads/contacts/connection points of power cables, e.g., with insulating electrical tape or other approved protective material. A short circuit can cause ignition, damage to the housing, or leakage of harmful chemicals. Always handle used alkaline cells and packs with caution. Alkaline cells and packs are high-energy hazardous waste, containing potentially flammable compounds and other chemicals harmful to health and the environment. In the worst-case scenario, the battery could ignite.

Improper disposal of used alkaline cells and battery packs can have serious consequences, including:

- contamination of soil and groundwater by heavy metals and electrolytes,
- hazard to humans and animals – toxic substances can cause illness. Heavy metals present in cells can cause a range of health problems, including damage to the nervous system, kidneys, and liver, and increase the risk of cancer.
- environmental pollution and loss of the possibility of recovering valuable raw materials such as lithium, nickel, manganese, and cobalt.

Critical conditions:

1. Under no circumstances should the battery terminals be short-circuited (shorting [+] to [-]); all contacts and connection points must be effectively insulated. Cells can contain a significant amount of energy, which can be a source of strong electric current and, in the event of a short circuit, cause electric shock or burns, release harmful chemicals, or ignition.

2. Do not mechanically damage batteries (e.g., puncture); this may release harmful/corrosive/toxic chemicals; in the worst case, it may lead to ignition. Used batteries must be effectively packaged to avoid this type of damage.

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3. Under no circumstances should cells be disposed of in standard municipal waste. This poses a critical environmental hazard and a potential hazard to people and animals, and in the worst case, a fire hazard. The collection of cells is only possible in special containers, further processing is only permitted by the relevant institutions/companies dealing with chemical processing and having the appropriate environmental permits.

SAFE HANDLING AND STORAGE OF USED BATTERIES

Storing and collecting used alkaline cells and battery packs requires adherence to specific safety and protection measures, including occupational health and safety regulations. Appropriate storage conditions must be ensured, and mechanical damage to cells/battery packs and contact with hazardous substances must be prevented. Handling used cells/battery packs should be carried out by trained employees who always wear appropriate personal protective equipment, such as protective clothing, gloves, safety glasses, and a hard hat. Training should identify potential hazards, such as electric shock from high current or voltage, burns, ignition (usually from a short circuit), release of harmful/corrosive/toxic chemicals, and procedures for managing identified hazards.

Conditions for the safe storage of used cells/battery packs:

▪ Used cells/battery packs should be stored selectively in non-conductive containers, resistant to the substances contained in the cells/battery packs, closed and labeled, and compliant with ADR regulations. Limit contact with other waste and flammable substances.

▪ Used cells/battery packs should be stored in a separate, weather-resistant area, away from sources of heat, fire, and moisture.

▪ Ensure adequate ventilation in rooms where used batteries/rechargeable batteries/cells are stored.

▪ The container containing used cells/battery packs should be free of any metal elements that could cause a short circuit.

▪ Do not mix damaged and undamaged batteries/rechargeable batteries/cells – separate storage is required.
▪ Power cable terminals/contacts/connection points in cells/packages must be effectively protected, e.g., with electrical tape or other approved protective material, to prevent short circuits. Ensure access by unauthorized persons is restricted.

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COUNTERPARTY'S STATEMENT

Wamtechnik Limited Liability Company (hereinafter referred to as the „Company") shall not be liable for damages that may result from the use of the offered alkaline cells and batteries made of alkaline cells contrary to their intended use and these Operating Rules (hereinafter referred to as the "Manual").

The purchase of alkaline cells and batteries offered by the Company is connected with getting acquainted with and accepting the above mentioned Manual. The Company's Counterparty, purchasing the cells and batteries in question from the Company, declares that he has familiarized himself with this Manual and is aware of the risks and threats that may result from using, storing and transporting the cells and batteries in a manner inconsistent with this Manual.

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