

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and others users requesting a GHS-compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The design, safety, manufacture, and qualification of branded consumer batteries follow ANSI and IEC battery standards. This document is based on principles set forth in the following hazard communication approaches: ANSI Z-400.1, GHS and IEC 62474.

| 1. Document Information                     |  |  |
|---|--|--|
| Document Name                               | LR03 AAA Alkaline Batteries  |  |
| Document ID                                 | NAC-AIS-LR03   |  |
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| Version                                     | 1A   |  |
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| Last Revision                               | New  |  |
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| 2. Company Information                      |  |  |
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| 3. Article Information                      |  |  |
| Description                                 | LR03 AAA 1.5v alkaline battery   |  |
| Product Category                            | Alkaline dry battery   |  |
| Use   | Calculator, clock, toy,etc   |  |
| Sizes                                       | AAA  |  |
| Principles of Operation                     | A battery powers a device by converting stored chemical energy into electrical energy. |  |
| Product Images                              |  |  |
| 4. Article Construction                     |  |  |
| Applicable Battery Industry                 | ANSI C18.1M Part 1, ANSI C18.1M Part 2, ANSI C18.4, IEC 60086,1, IEC 60086-2, IEC      |  |
| Standards                                   | 60086-5  |  |
| Electro-technical System                    | Alkaline Manganese Dioxide   |  |
| Electrode - Negative                        | Zinc (CAS # 7440-66-6)   |  |
| Electrode - Positive                        | Manganese Dioxide (CAS # 1313-13-9)  |  |
| Electrolyte                                 | Alkali Metal Hydroxide (aqueous potassium hydroxide - CAS # 1310-58-3)                 |  |
| Materials of Construction - Can             | Nickel Plated Steel  |  |
| Declarable Substances                       | None   |  |
| (IEC 62474 Criteria 1)                      |  |  |
| Mercury Free Battery<br>(ANSI C18.4M <5ppm) | Yes  |  |
| (Augi Croitin Appin)                        |  |  |



| Ingestion/Small Parts Warning                                 | Keep away from children. If swallowed, consult a physician immediately.  |
|---|--|
| Normal Conditions of Use                                      | Exposure to contents inside the sealed battery will not occur unless the battery leaks, is exposed to high temperatures, or is mechanically abused.  |
| Note to Physician   | A damaged battery will release concentrated and caustic potassium hydroxide.   |
| First Aid - If swallowed                                      | Do not induce vomiting. Seek medical attention immediately. Chinese calls 120.   |
| First Aid - Eye Contact                                       | Flush with water for at least 15 minutes. Seek medical care if irritation persists.  |
| First Aid - Skin Contact                                      | Remove contaminated clothing. Wash skin with soap and water. Seek medical care if irritation persists.   |
| First Aid - Inhalation  | Remove to fresh air.   |
| Battery Safety Standards & Testing                            | Naccon batteries meet the requirements of ANSI C18. 1M Part 2 and IEC 60086-1,2.<br>These standards specify tests and requirements for alkaline batteries to ensure safe<br>operation under normal use and reasonably foreseeable misuse. The test regimes assess<br>three conditions of safety. These are:<br><u>1-Intended use simulation:</u> Partial use, vibration, thermal shock, and mechanical shock<br><u>2-Reasonably foreseeable misuse:</u> Incorrect installation, external short-circuit, free fall<br>(user-drop), over-discharge, and crush<br><u>3-Design consideration:</u> Thermal abuse, mold stress |
| Precautionary Statements                                      | <b>CAUTION:</b> Batteries may explode or leak, and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled.<br>Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label. Keep small batteries (i.e., AAA) away from children. If swallowed, consult a physician at once.   |
| 6. Fire Hazard & Firefighting                                 |  |
| Fire Hazard   | Batteries may rupture or leak if involved in a fire.   |
| Extinguishing Media   | Use any extinguishing media appropriate for the surrounding area.  |
| Fires Involving Large Quantities of<br>Batteries              | Large quantities of batteries involved in a fire will rupture and release caustic potassium hydroxide. Firefighters should wear self-contained breathing apparatus and protective clothing.  |
| 7. Handling & Storage   |  |
| Handling Precautions  | Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly.<br>Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high<br>temperatures. Install batteries in accordance with equipment instructions.  |
| Storage Precautions   | Store batteries in a dry place at normal room temperature. Refrigeration does not make them last longer.   |
| Spills of Large Quantities of Loose<br>Batteries (unpackaged) | Notify spill personnel of large spills. Irritating and flammable vapors may be released<br>from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all<br>ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should<br>wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes.<br>Increase ventilation. Carefully collect batteries and place in appropriate container for<br>disposal. Remove any spilled liquid with absorbent material and contain for disposal.  |
| 8. Disposal Considerations (GHS Section                       | on 13)   |
| Collection & Proper Disposal                                  | Do not accumulate large quantities of used batteries for disposal as accumulations<br>could cause batteries to short-circuit. Do not incinerate. In China, there are regulations<br>for the collection and recycling of batteries, consumers should dispose of their used<br>batteries into the collection<br>network at municipal depots and factories. They should not dispose of batteries with<br>household trash.   |



| 9. Transport Information (GHS Sectio                              |   |
|---|---|
| Regulatory Status   | Not regulated. Alkaline batteries (sometimes referred to as "Dry Cell" or "household" batteries) are not listed or regulated as dangerous goods under IATA Dangerous Goods Regulations, ICAO Technical Instructions, IMDG Code, UN Model Regulations.   |
| UN Identification Number/<br>Shipping Name                        | None - Not Required   |
| Special Provision (SP) Conformance                                | Special regulatory provisions require batteries to be packaged in a manner that prevents<br>the generation of a dangerous quantity of heat and short circuits. Shippers can prepare<br>batteries by taping the terminals, individually packaging batteries, or otherwise<br>segregating the batteries to prevent risk of creating a short circuit. Batteries shipped in<br>original unopened Naccon packaging is compliant. |
| Air Transport (IATA/ICAO) SP                                      | Special Provision A123 (61th Edition - 2020). NOTE: The words "NOT RESTRICTED" and "SPECIAL PROVISION A123" must be included on the description of the substance on the Air Waybill, when air way-bill is issued.   |
| Passenger Air Travel  | No restrictions   |
| 10. Regulatory Information (GHS Sect                              | tion 15)  |
| 10a. Battery Requirements   |   |
| GB/T8897.1.2-2013   | During the manufacturing process, no mercury is added.  |
| EU Battery Directive 2006/66/EC                                   | Compliant with marking and substance restrictions for mercury (<0.0005%); cadmium   |
| & amendment 2013/56/EU  | (<0.0020%)I and lead (<0.0040%). Global labels are marked with the special collection symbol and the EU qualifier in accordance with EU Battery Directive 2006/66/EC, Article 11, Paragraph 1 on batteries and accumulators and waste batteries and accumulators  |
| 10b. General Requirements   |   |
| USA CPSIA 2008 (PL. 11900314)                                     | Exempt  |
| USA CPSC FHSA (16 CFR 1500)                                       | Consumer batteries are not listed as a hazardous product.   |
| USA EPA TSCA Section 13 (40 CFR<br>707.20)                        | For customs clearance purpose, batteries are defined as an "Article".   |
| USA EPA RCRA (40 CFR 261)   | Classified as non-hazardous waste (not ignitable, corrosive, reactive or toxic). Federal Universal Waste Regulations (40 CFR 273) do not apply. State requirements may be more stringent than Federal.  |
| California Prop 65  | No warning required per 3rd party assessment.   |
| CANADA Products Containing<br>Mercury Regulations SOR/20140254    | Mercury free  |
| EU REACH SVHC's (161 Substances)<br>Candidate List December 2014) | No listed substances are present (>0.01% w/w)   |
| EU REACH Article 31   | SDS is not required consumer alkaline batteries.  |



| 10c. Regulatory Definitions - Articles   |  |  |
|--|--|--|
| USA OSHA                                 | 29 CFR 1910.1200(b)(6)(v)  |  |
| USA TSCA                                 | 40 CFR 704.3; 710.2(3)( c); and [19 CFR 12.1209a)]   |  |
| EU REACH                                 | Title 1 - Chapter 2 - Article 3(3)   |  |
| GHS                                      | Section 1.3.2.1  |  |
| 11. Other Information                    |  |  |
| 11a. Certification & 3rd Party Approvals |  |  |
| UL (UTGT2.S50939 Single Multiple         | AAA, 9V  |  |
| Station Smoke Alarms - Component)        | Certification Standard: ANSI/UL 217 Single & Multiple Station Smoke Alarms                 |  |
| 11b. AIS Hazard Communication Appr       | oaches (consulted in developing this document)   |  |
| Globally Harmonized System (GHS)         | GHS SDS requirements and classification criteria do not apply to articles or products      |  |
|  | (such as batteries) that have a fixed shape, which are not intended to release a chemical. |  |
|  | The article exemption is found in Section 1.3.2.1.1 of the GHS and reads: <i>The GHS</i>   |  |
|  | applies to pure substances and their dilute solutions and to mixtures. "Articles" as       |  |
|  | defined by the Hazard Communication Standard (29 CFR 1900.1200) of the OSHA of             |  |
|  | the USA, or by similar definition, are outside the scope of the system."                   |  |
|  |  |  |
| IEC 62474 Ed. 1.0 B:2012 Material        | An international standard that came into effect in March 2012 concerning declaration       |  |
| Declaration for Products of and for      | for electrical and electronic products. IEC 6274 replaces the defunct Joint Industry Guide |  |
| the Electro-technical Industry           | – Material Declaration for Electro-technical Products (JIG-101-Ed 4.1 (May 21, 2012)       |  |
| · · · · · · · · · · · · · · · · · · ·    |  |  |
| IEC 62474 Database - Publically          | The general principle for a substance to be included in the database as a declarable       |  |
| available online (maintained by TC11:    | substance is: 1) existing national laws or regulations in an IEC member country that are   |  |
| Environmental Standardization for        | relevant to Electro-technical products and that prohibit or restrict substances, or that   |  |
| electrical and electronic products and   | have a labeling, communication, reporting or notification requirement, and 2) applying     |  |
| systems.                                 | IEC 62474 criteria results in identification of declarable substance.                      |  |
|  |  |  |
| ANSI Z 400.1/Z19.1 (2010)                | 2.1 Scope: Applies to preparation of SDSs for hazardous chemicals used under               |  |
|  | occupational conditions. Does not address how the standard may be applied to articles.     |  |
|  | It presents basic information on how to develop and write a SDS. Additional information    |  |
|  | is provided to help comply with state and federal environmental and safety laws and        |  |
|  | regulations. Elements of the standard may be acceptable for International use.             |  |
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| DISCLAIMER: This AIS is intended to p    | rovide a brief summary of our knowledge and guidance regarding the use of this             |  |

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