Issued Date : Jan. 01. 2019

PRODUCT SAFETY DATA SHEET

1. PRODUCT AND MANUFACTURER INFORMATION
   Product Category : Alkaline Manganese Battery
   Type : LR6 (Made in Korea)
   Nominal Voltage : 1.5 V
   Supplier's Name : Bexel CO.,LTD
   Supplier's Address : 168, Sanho-daero, Gumi city, Kyung-Buk, KOREA.
   Manufacturer's Name : Bexel CO.,LTD

2. COMPOSITION / INFORMATION ON INGREDIENTS

Assay ITEM	Material	CAS No.	Contents
Cathode Mix	MnO_2	1313-13-9	27 wt%
	KOH	1310-58-3	10wt%
	Carbon	7782-42-5	5 wt%
Anode Gel	Zinc	7440-66-6	15 wt%
	KOH	1310-58-3	10 wt%
Collector Rod	Cu	7440-50-8	3 wt%
Gasket	Nylon	32131-17-2	2 wt%
Separator	Textile	9003-33-2 6-682	1 wt%
Steel Can	Fe	7439-89-6	23 wt%
Label	Al	7429-90-5	1 wt%
Safety-Ring	PVC	9002-86-2	1 wt%
Anode Terminal	Fe	7439-89-6	2 wt%

3. HAZARDS IDENFICATION
   Under normal conditions of use, the battery is hermetically sealed.

Ingestion :	Swallowing a battery can be harmful. Contents of an open battery can Cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.
Inhalation :	Contents of an open battery can cause respiratory irritation.
Skin contact :	Contents of an open battery can cause skin irritation and/or chemical burns.
Eyes contact :	Contents of an opened battery can cause serve irritation and chemical burns.

4. FIRST AID MEASURES

Ingestion :	Do not include vomiting or give food or drink. Seek medical attention immediately.
Inhalation :	Provide fresh air and seek medical attention.
Skin contact :	Remove contaminated clothing an wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.
Eyes contact :	Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains Seek medical attention.

5. FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.
Fire figters should wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Chemical contents are contained in sealed can. But if the battery is mechanically or electrically abused the contents may leak out. In this case, wipe a cloth absorbed boric acid solution or water and wash away remainder with plenty of water. (Put on protective glasses, mask, gloves.)

7. HANDLING AND STORAGE

Handling :	If battery is misused or abused, leakage, heating or in extreme case, rupture may results. Therefore pay attention to next point. (1) This battery is not designed for rechargeable. Do not charge. (2) Do not shore. (3) Be sure batteries are installed in right direction. (4) Do not mix different type batteries not mix new and old together. (5) Do no directly heat, solder not throw into fire. (6) Do not disassemble, deform not modify batteries. (7) Do not allow children to replace batteries without adult supervision.
Storage :	Batteries shall be stored in well-ventilated, dry and cool conditions. For normal storage, the temperature should be between +10℃ and +25℃ and never exceed +30℃. Extremes of humidity (over 95% RH and below 40% RH)for sustained periods should be avoid. DO not place batteries in a place exposed to direct sunshine for a long time or splashed by rain water. Exposure to a high temperature will increase deterioration of performances and facilitates electrolyte leakage. When batteries get wet, their insulation resistance decrease, self-discharge may occur and rust may be generated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection : Not necessary under normal use.
Eye protection : Not necessary under normal use.
Skin protection : Not necessary under normal use.
Other protection tools : Not necessary under normal use.

9. PHYSICAL AND CHEMICAL PROPERTIES

pH :	N/A
Boling point :	N/A
Melting point :	N/A
Decomposition temperature :	N/A
Flash point :	N/A
Vapor pressure :	N/A
Specific gravity :	N/A
Solubility :	N/A

10. STABILITY AND REACTIVITY

The batteries are very stable as long as using normally.
But avoid the following conditions because the rupture of battery or the leakage of contents may occur. To charge, short, heat, throw into fire, and disassemble batteries.

11. TOXICOLOGICAL

Alkaline batteries are not hazardous waste. Under normal condition of use, alkaline batteries are non-toxic.

12. ECOLOGICAL

When the batteries was disposed of and buried under field , the leakage may happen by corrosion as times go. It is not informed, however, that such improper handling caused to affect environment through the long term of underground experiment.

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with applicable federal, state and local regulations.

14. TRANSPORTATION :

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents shorts circuits and be contained in" strong outer packaging" that prevents spillage of contents. All original packaging for alkaline batteries has been designed to be compliant with these regulatory concerns.
Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations(49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.
All alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Reguations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

" Not Restricted as per special provision A123"

1) SHIPPING BASIC DESCRIPTION : DOT & IATA : NOT RESTRICTED

2) DOT REGULATIONS :

HAZARD CLASS : NOT RESTRICTED

3) LAND TRANSPORT ADR/RID(CROSS-BOEDER)

ADR/RID CLASS : NOT RESTRICTED

4) MARITIME TRANSPORT IMDG :

IMDG CLA : NOT RESTRICTED

ADR/RID CLASS : NOT RESTRICTED

5) AIR TRANSPORT ICAO-TI and IATA-DGR :

ICAO/IATA CLASS : NOT RESTRICTED

15. REGULATORY INFORMATION

Batteries marked by Bexel Battery Manufacturing, Inc. are not classified as dangerous goods by The US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE Ⅲ –As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

16. OTHER INFORMATION

Reference ; IEC 60086-1(2011), 60086-2(2011), 60086-5(2005)