Add: Huaqiao Ind. Area, Caitang, Chaoan, Guangdong, PRC Post code: 515644

Tel: 86-768-667 3928 / 667 1318 Fax: 86-768-668 2928 E-mail: z.long@zhenglong.net Website: www.zhenglong.net

Material Safety Data Sheet

Product Name: Philips Alkaline Battery Manager

Chemical System: Alkaline Manganese Dioxide-Zinc

SECTION 1 Manufacturer Information

Chaozhou Zhenglong Battery Industry Co., Ltd

Huaqiao Industry Area Caitang, Chaoan, Guangdong, China

Tel: +86-768-6671318 Fax: +86-768-6682928

SECTION 2 Hazards Identification:

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

Ingestion:.

Inhalation: Skin Contact: Contents of an open battery can cause skin irritation and/or chemical

burns.

Eve Contact:

SECTION 3 Hazardous Ingredients

Name of ingredient	PEL (OSHA)	TLV (ACGIH)	% wt.
Graphite	15mg/m3 TWA (total dust)	2mg/m3 TWA (respirable	2-6
(CAS# 7782-42-5)	5 mg/m3 TWA (respirable fraction)	fraction)	
Manganese Dioxide (CAS#	5 mg/m3 Ceiling (as Mn)	0.2mg/m3 TWA (as Mn)	30-45
1313-13-9)			
Potassium Hydroxide	None established	2 mg/m3 Ceiling	4-8
(CAS# 1310-58-3)			
Zinc	15mg/m3 TWA (total dust) 5	10 mg/m3 TWA PNOC**	12-25
(CAS# 7440-66-6)	mg/m3 TWA (respirable fraction)	(inhalable particulate)	
		3 mg/m3 TWA PNOC**	
		(respirable particulate)	
Non-Hazardous Components Steel	None established	None established	18-22
(iron CAS# 7439-89-6)	None established	None established	Balance
Water, Paper, Plastic and Other			

^{*} PNOR: Particulates not otherwise regulated

SECTION 4 First-aid Measure

General speaking it is not expected to result in situation that requires first-aid measure,. Except the damaged batteries may cause they release the contents.

<u>Inhalation</u>: If vapours or fumes from vented or leaked batteries are irritation, move to fresh air and get medical attention.

^{**}PNOC: Particulates not otherwise classified

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<u>Eyes</u>: Check for and remove any contact lens, flush eyes with plenty of water, holding eyelids open, for at least 20 minutes, get medical help.

<u>Skin</u>: Immediately move the metal fragments and chemical components flush skin with plenty of water at least 15 minutes, get medical, if necessary,

<u>Ingestion</u>: Get immediately medical attention, do not induce vomiting or give a liquid to unconscious person.

SECTION 5 Fire Fighting Measure:

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 fighters should wear self-contained breathing apparatus.

Extinguishing media: Use appropriate agent for adjacent fire.

Flash point: Not available

Auto-ignition temperature: Not available

Flammable limits: Not available

<u>Products of combustion:</u> Zinc oxide, manganese oxide.

SECTION 6 Accidental Release Measure:

To cleanup leaking batteries:

Ventilation Requirements:

SECTION 7 Handling and Storage:

<u>Precaution:</u> Handling and transfer the products with care, make sure the packing always in good condition.

Damaged packing may cause batteries contact together, in this case batteries may short circuit or improperly connected, it cause batteries venting, leaking or exploding.

<u>Storage</u>: Store in a dry, cool and well-ventilated area. Elevated temperatures can result in shortened battery life.

SECTION 8 Exposure control / Personal protection

Ventilation Requirements: Not necessary under normal conditions. **Respiratory Protection:** Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions.

Gloves: Not necessary under normal conditions.

SECTION 9 Physical and Chemical Properties

Physical State and Appearance: Solid

Melting Point : 419°C

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<u>Vapour pressure:</u> Not available.

PH (1% soln/water): Not available.

Solubility: Insoluble.

Volatility: Not available.

Specific gravity: (water=1) 1.42

Odour: Odourless.

Taste: Not available.

SECTION 10 Stability and Reactivity

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

Stability: The products are stable

Instability temperature: Not available.

Incompatibility: Reactive with acids and alkalis.

Corrosivity: None.

Hazardous Polymerization: Will not occur.

SECTION 11 Toxicological information

<u>Note</u>: Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

Toxicity to Animals: Not applicable

<u>Chronic Effects on Human:</u> Not applicable.

SECTION 12 Ecological information

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This product has not been tested for environmental effects.

SECTION 13 Disposal consideration

<u>Waste disposal:</u> Consult your local or regional authorities, disposal maybe subject to national, state, or local laws.

SECTION 14 Transportation Information

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 short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for PHILIPS carbon batteries has been designed to be compliant with these regulatory concerns.

Carbon batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the IATA Dangerous Goods Regulations(IATA 57th Edition 2016), 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.

Regulatory Body	Special Provisions
ADR	295 - 304, 598
IMDG	295 - 304
UN	295 - 304
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	295 - 304

All PHILIPS 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 Regulations 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.

SECTION 15 REGULATORY INFORMATION

Batteries marketed by PHILIPS are not classified as dangerous goods by the US Department of Transportation or the majorinternational 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.

The battery meet the SP304 of IMDG which said:Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provisions of this Code provided the batteries are securely packed and protected against short-circuits. Examples of

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such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries.

SECTION 16 Other information

Warning wordings: "Keep out reach of children"

"Do not recharge or discard in fire or use used battery with new one, make sure polarity"

W TRADE BUSINESS