

# Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: Super heavy duty Battery

Revision date: 18/03/2014

Printing date: 18/03/2014

## 1. Identification

### *(a) Product identifier*

Product name: Super heavy duty Battery

### *(b) Other means of identification*

Product description: Model: R03P  
Product Code: R03P  
Nominal Voltage: 1.5V  
Weight: 6.407g  
Dimension: 43.3mm-44.5mm (Total Length)  
9.5-10.5mm (External diameter)

### *(c) Recommended use of the chemical and restrictions on use*

Recommended use: Battery.  
Restriction on use: No information available.

### *(d) Details of the supplier of the product*

Company name(China) SHENZHEN PKCELL BATTERY CO.,LTD  
Address: E2 Building ,Guangming Technology Park,No.24 Zhonghua Road ,Longhua New Area,  
Shenzhen, China  
E-mail: info@pkcell.net  
Telephone: +86-0755-86670672

### *(e) Emergency phone number*

+86-0755-86670672

## 2. Hazard(s) identification

### *(a) Classification of the chemical*

The batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. A sealed Li-ion Battery is not hazardous in normal use.

### *(b) Label elements*

Pictogram(s): No pictogram.  
Signal word: No signal word.  
Hazard statements: No hazard statement.  
Precautionary statements: No precautionary statement.

### *(c) Description of any hazards not otherwise classified*

In case of mistreatment (abusive over charge, reverse charge, external short circuit...) and in case of fault some electrolyte can leak from the cell through the safety device. In these cases refer to the risk of the electrolyte. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin. The electrode materials are only hazardous, if the materials are released by mechanical damaging of the cell or if exposed to fire.

Skin touch: Contact with battery electrolyte may cause burns and skin irritation.

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Eyes touch: Contact with battery electrolyte may cause burns. Eye damage is possible.

Inhalation: Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Ingestion: Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

#### **(d) Ingredient with unknown acute toxicity**

No information available.

### 3. Composition/information on ingredients

#### **(a) Mixtures information**

Chemical name	CAS No.	Concentration%
Manganese Dioxide	1313-13-9	48
Zinc	7440-66-6	28.5
Acetylene	74-86-2	3.8
Stainless Steel	12681-83-3	11.36
Water	7732-18-5	7.2
Graphite	7782-42-5	3
others	NA	0.84

### 4. First-aid measures

#### **(a) Description of first aid measures**

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice / attention if you feel unwell.

Skin contact: Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice / attention if you feel unwell.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice / attention if you feel unwell.

Ingestion: Have victim drink 60 to 240 mL (2-8 oz.) of water. and DO NOT induce vomiting. Get medical aid.

#### **(b) Most important symptoms/effects, acute and delayed**

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

#### **(c) Immediate medical attention and special treatment**

No information available.

### 5. Fire-fighting measures

#### **(a) Extinguishing media**

Suitable extinguishing media: Use foam, dry powder or dry sand, CO<sub>2</sub> as appropriate.

Unsuitable extinguishing media: No information available.

#### **(b) Special hazards arising from the chemical**

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO,

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CO<sub>2</sub>, Metal oxides, Irritating fumes

## **(c) Special protective equipment and precautions for fire-fighters**

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

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## **6. Accidental release measures**

### **(a) Personal precautions, protective equipment and emergency procedures**

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors.

### **(b) Methods and materials for containment and cleaning up**

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

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## **7. Handling and storage**

### **(a) Precautions for safe handling**

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries Use recommended charging time and current.

### **(b) Conditions for safe storage, including any incompatibilities**

If the Polymer Lithium Battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the Polymer Lithium Battery periodically. Operating temperature: Charge: 0°C~45°C. Discharge: -20°C~60°C And recommended at -20°C~45°C for 1 month storage, at -20°C~35°C for 3 months storage. The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more. The voltage for a long time storage shall be 3.7V~4.2V range. Do not storage Polymer Lithium Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. Keep out of reach of children.

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## **8. Exposure controls/personal protection**

### **(a) Control parameters**

Not established.

### **(b) Appropriate engineering controls**

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Under normal conditions (during charge and discharge) release of ingredients does not occur.

## **(c) Personal protective equipment**

Respiratory protection:	No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection.
Hand protection:	Wear protective gloves.
Eye/face protection:	No personal protective equipment normally required.
Skin/body protection:	Wear protective clothing to prevent contact.

## 9. Physical and chemical properties

(a) Appearance	Black square solid
(b) Odor	Monotony
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not applicable.
(h) Evaporation rate	Not applicable.
(i) Flammability	Non flammable.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not applicable.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	130°C
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

## 10. Stability and reactivity

### **(a) Reactivity**

Stable under recommended storage and handling conditions.

### **(b) Chemical stability**

Stable under normal conditions.

### **(c) Possibility of hazardous reactions**

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition.

### **(d) Conditions to avoid**

Do not subject Polymer Lithium Battery to mechanical shock. Keep away from open flames, high temperature.

### **(e) Incompatible materials**

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Strong oxidizer, strong acid.

## **(f) Hazardous decomposition products**

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

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## 11. Toxicological information

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### **(a) Information on the likely routes of exposure**

Inhalation:	Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.
Ingestion:	Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.
Skin contact:	Contact with battery electrolyte may cause burns and skin irritation.
Eye contact:	Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions (during charge and discharge) release of ingredients does not occur. If accidental release occurs see information in section 2, 3, and 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

### **(b) Information on toxicological characteristics**

<b>Acute toxicity:</b>	No data available.
<b>Skin corrosion/irritation:</b>	The liquid in the battery irritates.
<b>Serious eye damage/irritation:</b>	The liquid in the battery irritates.
<b>Respiratory sensitization:</b>	The liquid in the battery may cause sensitization to some person.
<b>skin sensitization:</b>	The liquid in the battery may cause sensitization to some person.
<b>Carcinogenicity:</b>	Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).
<b>Germ Cell Mutagenicity:</b>	No data available.
<b>Reproductive Toxicity:</b>	No data available.
<b>STOT-Single Exposure:</b>	No data available.
<b>STOT-Repeated Exposure:</b>	No data available.
<b>Aspiration Hazard:</b>	No data available.

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## 12. Ecological information

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### **(a) Ecotoxicity**

Water hazard class 1(Self-assessment): slightly hazardous for water.

### **(b) Persistence and Degradability**

No information available.

### **(c) Bioaccumulative potential**

No information available.

### **(d) Mobility in soil**

No information available.

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## (e) Other adverse effects

No information available.

## 13. Disposal considerations

### (a) Safe handling and methods of disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Local regulations may be more stringent than regional or national requirements.

## 14. Transport information

Super heavy duty Battery is considered to be "Batteries, dry," batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and International maritime Dangerous Goods Regulations (IMDG).

International Civil Aviation Administration (ICAO) and International Air Transport Association (IATA) Special Provision A123, Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent:

(a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and

(b) accidental activation.

The words "Not Restricted" and the Special Provision number must be included in the description of the substance on the Air Waybill as required by "Not Dangerous Goods", when an Air Waybill is issued.

- (a) UN number NA
- (b) UN Proper shipping name Batteries, dry
- (c) Transport hazard class(es) NA
- (d) Packing group (if applicable) NA
- (e) Marine pollutant (Yes/No) No
- (f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) No information available.
- (g) Special precautions No information available.

## 15. Regulatory information

### (a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	EU EINECS	Japan ENCS	Korea ECL	China IECSC	Canada DSL
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Listed
74-86-2	Listed	Not listed	Listed	Listed	Listed	Listed
12681-83-3	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
7732-18-5	Listed	Listed	Not listed	Listed	Listed	Listed
7782-42-5	Not listed	Listed	Not listed	Not listed	Not listed	Not listed

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NA	Listed	Listed	Listed	Listed	Listed	Listed
Remark: The above-mentioned search results are based on the Non-Confidential Inventory.						

## 16. Other information, including date of preparation or last revision

### *(a) Preparation and revision information*

Date of previous revision: Not applicable.

Date of this revision: 18/03/2014

Revision summary: The first New SDS

### *(b) Abbreviations and acronyms*

TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
EINECS:	European Inventory of Existing Commercial chemical Substances
ENCS	Japanese Existing and New Chemical Substances
ECL:	Existing Chemicals List, the Korean chemical inventory.
IECSC:	Inventory of existing chemical substances in China.

### *(c) Disclaimer*

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----