

# MATERIAL SAFETY DATA SHEET

## FOR USB RECHARGEABLE BATTERY

### Section I

Manufacturer's Name **Smart Zone Technology Limited**

Address Flat A01, 5/F., Great Wall Fty Bldg, 11 Cheung Shun St., Lai Chi Kok, Kln, HK

Emergency Telephone Number (852) 3428 6032 Fax: (852) 3428 6033

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Identity Ref no.: SZ-USB

### Section II - Hazardous Ingredients / Identity Information

#### *Hazardous Components*

#### **Descriptions Approximate % of total weight**

Nickel Metal : ~ 40 Wt%

Iron Metal : ~ 5 Wt%

Cobalt Metal : ~ 10 Wt%

Cuprum Metal : ~ 5 Wt%

Manganic : ~ 2 Wt%

Lanthanum : ~ 15 Wt%

Nickel Hydroxide : ~ 20% Wt%

Sodium Hydroxide : ~ 1 Wt%

Potassium Hydroxide : ~ 2 Wt%

### Section III - Physical / Chemical Characteristics

Boiling Point : N.A. Specific Gravity (H<sub>2</sub>O=1) : N.A.

Vapor Pressure (mm Hg) : N.A. Melting Point : N.A.

Vapor Density (AIR=1) : N.A. Evaporation Rate (Butyl Acetate) : N.A.

Solubility in Water : N.A.

Appearance and Odor : Cylindrical Shape and Odorless

### Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) : N.A.

Flammable Limits : N.A.

LEL : N.AU.

EL : N.A.

Extinguishing Media : N.A.

Special Fire Fighting Procedures : N.A.

Unusual Fire and Explosion Hazards : Do not dispose of battery in fire - may explode

Do not short-circuit battery - may cause burns

### **Section V : Reactivity Data**

Stability : Unstable ( ) Stable (X) Conditions to Avoid

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization : May Occur ( ) Will Not Occur (X) Conditions to Avoid

### **Section VI - Health Hazard Data**

Route(s) of Entry Inhalation ? Skn ? Ingestion ?

N.A. N.A. N.A.

#### ***Health Hazard (Acute and Chronic) / Toxicological Information***

*In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte*

*In contact with electrolyte can cause severe irritation and chemical burns.*

*Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.*

### **Section VII - First Aid Measures**

#### ***First aid Procedures***

*If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.*

*If electrolyte comes into contact with eyes, wash with copious amount of water*

*for fifteen minutes, and*

*consult doctor immediately.*

*If electrolyte vapors are inhaled, provide fresh air and seek medical attention if*

*respiratory irritation*

*develops. Ventilate the contaminated area.*

### **Section VIII - Fire and Explosion Hazard Data**

Flash Point (Method Used) Ignition Temp. Flammable Limits LEL UEL

N.A. N.A. N.A. N.A. N.A.

#### ***Extinguishing Media***

Carbon Dioxide, Dry Chemical or Foam Extinguishers

#### ***Special Fire Fighting Procedures***

N.A.

#### ***Unusual Fire and Explosion Hazards***

*Do not dispose of battery in fire - may explode*

*Do not short-circuit battery - may cause burns*

### **Section IX - Accidental Release or Spillage**

#### ***Steps to be taken in case material is released or spilled***

Batteries that are leakage should be handled with rubber gloves.

Avoid direct contact with electrolyte

*Wear protective clothing and a positive pressure self-contained breathing*

*apparatus (SCBA).*

### **Section X - Handling and Storage**

### ***Safe Handling and Storage Advice***

*Batteries should be handled and stored carefully to avoid short circuits.*

*Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries.*

*Never disassemble a battery.*

*Do not breathe cell vapors or touch internal material with bare hands.*

*Keep batteries between -30 °C and 35 °C for prolong storage.*

### **Section XI - Exposure Controls / Person Protection**

Occupational Exposure Limits : LTEP STEP

N.A. N.A.

Respiratory Protection (Specify Type)

N.A.

Ventilation Local Exhausts : N.A. Special : N.A.

Mechanical (General) : N.A. Other : N.A.

Protective Gloves : N.A. Eye Protection : N.A.

Other Protective Clothing or Equipment: N.A.

Work / Hygienic Practices : N.A.

### **Section XII - Ecological Information**

N.A.

### **Section XIII - Disposal Method**

Dispose of batteries according to government regulations

### **Section XIV - Transportation Information**

USB rechargeable batteries are considered to be "Dry Cell" 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). The only IATA requirement for shipping these

batteries is special provision A199 and edition 60th/2019 of IATA regulation which states : "Batteries, dry are not subject to the requirement of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). As of 1/1/97 IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short circuiting.

### **Section XV - Regulatory Information**

Special requirement be according to the local regulatory.

### **Section XVI - Other Information**

The data in this Material Data Safety Sheet relates only to the specific material designated herein.

### **Section XVII - Measures for fire extinction**

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.

**- END -**