

MATERIAL SAFETY DATA SHEET

FOR USB RECHARGEABLE BATTERY

Section I

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

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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 (H₂O=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.

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