# MATERIAL SAFETY DATA SHEET (MSDS)

Scan module for Pixavi Phone – 17-S1Z0-0001/0003 – Issue Date: 2023-04-26

## 1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| **Product Name** | Rechargeable Li-ion Polymer Battery |
| **Model** | Scan module for Pixavi Phone – 17-S1Z0-0001/0003 |
| **Rating** | 3.8V 3200mAh 12.16Wh (Nominal) |
| **Company** | BARTEC GmbH |
| **Address** | Max-Eyth-Str. 16, Bad Mergentheim, 97980, Germany |
| **Manufacturer 1 (pre-assembly)** | Hapro Electronics AS |
| **Address 1** | Mohagasvingen 8, 2770 Jaren, Norway |
| **Manufacturer 2** | BARTEC GmbH |
| **Address 2** | Max-Eyth-Str. 16, Bad Mergentheim, 97980, Germany |
| **Telephone no.** | +49 7931 597 0 |

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**BATTERY CELL**

| MATERIAL OR INGREDIENTS | Content (wt %) | CAS # |
|---|---|---|
| Lithium Cobalt Dioxide ($LiCoO_2$) + Lithium Nickel Cobalt Complex Dioxide | Less than 41wt% (less than 5wt% as Ni oxide) | 12190-79-3 193214-24-3 |
| Electrolyte (-) | Less than 16wt% | 21324-40-3, 96-49-1 and others |
| Graphite (C) | Less than 20wt% | 7782-42-5 |
| Aluminum (Al) | Less than 22wt% | 7429-90-5 |
| Copper, Nickel metal and inert materials | Remainder | 7440-50-8 and others |
| Lead (Pb)* | Less than 0.004wt%(40ppm) | 7439-92-1 |
| Mercury (Hg) * | Less than 0.0005wt%(5ppm) | 7439-97-6 |
| Cadmium (Cd) * | Less than 0.002wt%(20ppm) | 7440-43-9 |

* Banned or restricted material

## 3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

**3.1 PRIMARY ROUTES OF ENTRY**

Skin contact, Skin absorption, Eye contact, Inhalation, and Ingestion: NO

**3.2 SYMPTOMS OF EXPOSURE**

Skin contact : No effect under routine handling and use.
Skin absorption : No effect under routine handling and use.
Eye contact : No effect under routine handling and use.
Inhalation : No effect under routine handling and use.

## 4. FIRST AID MEASURES

**4.1 IF EXPOSED TO OUTSIDE OF BATTERY PACK OR BATTERY PACK GENERAL PARTS**

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard
INGESTION : If swallowed, obtain medical attention immediately.

**4.2 IF EXPOSED TO INTERNAL MATERIALS WITHIN CELL THE FOLLOWING ACTIONS ARE RECOMMENDED**

INHALATION : Leave area immediately and seek medical attention.
EYE CONTACT : Rinse eyes with water for 15 minutes and seek medical attention.
SKIN CONTACT : Wash area thoroughly with soap and water and seek medical attention.
INGESTION : Drink milk/water and induce vomiting; seek medical attention.

# 5. FIRE FIGHTING MEASURES

**5.1 GENERAL HAZARD**

Cell is not flammable but internal organic material will burn if the cell is incinerated.
Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

**5.2 EXTINGUISHING MEDIA**

Use extinguishing media suitable for the materials that are burning.

**5.3 SPECIAL FIREFIGHTING INSTRUCTIONS**

If possible, remove cell(s) from firefighting area. Do not heat pack above 100°C/212°F, as cell can then vent.

**5.4 FIREFIGHTING EQUIPMENT**

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

# 6. ACCIDENTAL RELEASE MEASURES

**6.1 ON LAND**

Place material into suitable containers and call local fire/police department.

**6.2 IN WATER**

If possible, remove from water and call local fire/police department.

# 7. HANDLING AND STORAGE

**7.1 HANDLING**

No special protective clothing required for handling individual packs.

**7.2 STORAGE**

Store in a cool place (preferably below 30°C/86°F) but prevent condensation on cells or batteries.
Charge the battery every 6 months to the amount specified by the manufacturer, even if the battery is not used.

# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 ENGINEERING CONTROLS**

Keep away from heat and open flame. Store in a cool dry place.

**8.2 PERSONAL PROTECTION**

| | |
|---|---|
| Ventilation/Respirator | : Not required during normal operations.<br>SCBA required in the event of a fire. |
| Eye/face protection | : Not required beyond safety practices of employer. |
| Gloves | : Not required for handling of cells. |
| Other protective wear or equipment | : Not necessary under normal use. |

# 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| State | : Solid |
| Odor | : N/A |
| PH | : N/A |
| Vapor pressure | : N/A |
| Vapor density | : N/A |
| Boiling point | : N/A |
| Solubility in water | : Insoluble |
| Specific gravity | : N/A |
| Density | : N/A |

# 10. STABILITY AND REACTIVITY

**10.1 REACTIVITY**

None

**10.2 INCOMPATIBILITIES**

None during normal operation. Avoid exposure to heat, open flame, and corrosives.

**10.3 HAZARDOUS DECOMPOSITION PRODUCTS**

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

**10.4 CONDITIONS TO AVOID**

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

# 11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.
Sensitization: NO Teratogenicity: NO Reproductive toxicity: NO Acute toxicity: NO

# 12.ECOLOGICAL INFORMATION

Lithium-ion cells and batteries should be disposed of in accordance with appropriate federal, state and local regulations. Battery is not biodegradable. Do not dispose in landfill. We recommend recycling since these cells and batteries contain recyclable material ($LiCoO_2$).

# 13.DISPOSAL CONSIDERATIONS

The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation. Do not dispose in household or commercial waste bin. For large quantities a disposal service is offered upon request.

# 14. TRANSPORT INFORMATION

**WITH REGARD TO TRANSPORT, THE FOLLOWING REGULATIONS ARE CITED AND CONSIDERED:**

- The International Civil Aviation Organization (ICAO) *Technical Instructions* (2021~2022 Edition)
- The International Air Transport Association (IATA) *Dangerous Goods Regulations* (62nd edition, Packing Instruction 965, 966 or 967 Section II or IB is applied as appropriate.
  Each package is capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery contact and without release of contents.
  There is no hazard in accordance with the UN recommendation tests (UN *Manual of Tests and Criteria*, Part III, sub-section 38.3)
- International Maritime Organization, the *International Maritime Dangerous Goods*(IMDG) *Code*(Edition 2018, Amendment 39-18,Special Provisions 188, 230, 348 & 957 for UN3480/3481 Lithium-Ion Battery, Packing Instruction P903, P910 for Lithium-ion batteries)
- US Department of Transportation (DOT) 49 Code of Federal Regulations

# 15. REGULATORY INFORMATION

Local hazardous waste disposal laws.
This product is made from materials with no detectable mercury.
This product is not subject to the 29 CFR 1910.1200 OSHA requirements.

# 16. OTHER INFORMATION

The information contained in this Safety data sheet is based on the present state of knowledge and current legislation. This safety data sheet provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

For further information, please contact a Bartec sales representative.

**END OF SAFETY DATASHEET**