

## Product And Company Identification:

<b>Product:</b>	CNB451E, CNB550E and CNB950E	<b>Date Prepared:</b>	01 Jan, 2017
<b>Manufacturer's Name:</b>	Entel UK Limited,		
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## Product Composition:

Product Code	Material	Quantity (%)
CNB451E, CNB550E and CNB950E	Lithium Cobalt oxide (LiCoO <sub>2</sub> )	<35
	Graphite	25-30
	Copper	2-10
	Aluminium	2-5
	EC, DMC, EMC and Lithium Hexafluorophosphate etc	1-5
	Highpolymers	<20

As manufactured lithium ion cells do not contain lithium metal

The Watt-hour rating for the Entel lithium ion products specified in this document is 14Wh

All Entel products should be recycled by the relevant local authorities (recycling information relating to the WEEE Directive may be found on the Entel web site [www.entel.co.uk](http://www.entel.co.uk)).

## Hazards Identification

For the battery cell, chemical materials are stored in a hermetically sealed case designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage. However, if exposed to fire, added mechanical shocks, decomposed, added electric stress by misuse, the gas released vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released. Moreover, if heated strongly by a surrounding fire, acrid gas may be emitted.

### Most Important Hazards and Effects:

- **Inhalation:** The steam of the electrolyte has an anaesthesia action and stimulates respiratory tract.
- **Skin contact:** The steam of the electrolyte stimulates skin, and if brought in contact, can cause a sore.
- **Eye contact:** The steam of the electrolyte can cause sore eyes.
- **Specific hazards:** If the electrolyte is in contact with water, it will generate hydrogen fluoride. This electrolyte is inflammable. Do not expose to fire.

## First Aid Measures

### Internal cell materials of an opened battery cell

- **Inhalation:** Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
- **Skin contact:** Remove contaminated clothes and shoes immediately. Wash the adhered or contact region with soap and plenty of water immediately.
- **Eye contact:** Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.

### A battery cell and internal cell materials of an opened battery cell

- **Ingestion:** Induce vomiting and seek medical attention immediately.

## Fire Fighting Measures

- **Suitable extinguishing measures:** Water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing, and fire foam.
- **Specific hazards:** Corrosive gas may be emitted during fire.
- **Specific methods of fire-fighting:** When the battery burns with other combustibles, use the fire-extinguishing method which corresponds to the combustibles. Extinguish a fire from the windward direction as much as possible.

## Accidental Release Measures

Internal cells materials, such as electrolyte leaked from battery cell, should be dealt with as follows:

- **Personal precautions:** Remove leaked materials with protective equipment. Do not inhale the gas.
- **Environmental precautions:** Battery should be disposed off according to the disposal section.

## Handling and Storage

- **Handling:** The battery pack and enclosed cells should not be opened. Do not expose to fire or high temperature. Do not soak cells in water. Do not expose to strong oxidisers. Do not crush.
- **Storage:** Avoid direct sunlight, high temperature, and high humidity. Store in a cool place

## Exposure Controls / Personal Protection

No personal protection is necessary during normal use. In case of exposure to internal cell materials wash affected area for at least 15 minutes.

## Physical and Chemical Properties

- Physical state: Solid; insoluble in water.
- Odour, pH, vapour pressure etc are not applicable

## Stability and Reactivity

- **Stability:** Stable under normal use.
- **Conditions to avoid:** Exposure to high temperature or fire and crushing.
- **Hazardous decomposition products:** None during normal use

## Toxicological Information

No known toxicological properties of the batteries during normal handling and use.

## Ecological Information

No known ecological risks of the batteries during normal use and handling.

## Disposal Considerations

- Entel Li-Ion batteries contain recyclable material. We recommended safe and environmentally responsible disposal where local recycling facilities exist. Do not dispose off in a fire.

## Transport Information

The Watt-hour rating for the Entel lithium ion products specified in this document is less than 20Wh for cells and 100Wh for batteries, they comply with UN Manual of Tests and Criteria Part III Subsection 38.3 and with all of the requirements set out in Section II and IB of Packing Instructions 965 and 966 for lithium ion batteries in the 58<sup>th</sup> Edition of the IATA DGR.

When shipping only 1-2 battery packs (without equipment) description is "UN3480 IATA DGR Section II, PI965"

When shipping more than 2 battery packs (without equipment) description is "UN3480 IATA DGR Section IB PI965"

Batteries offered for transport under UN 3480 PI965 Section II and Section IB cannot be shipped with a state of charge greater than 30% without approval of the State Of Origin and the State of the Operator under the written conditions established by those authorities. Packages are forbidden for carriage on passenger aircraft and must bear the Cargo Aircraft Only label in addition to the other marks and labels required by the regulations

When shipping batteries packed with equipment description is "UN3481 IATA DGR Section II, PI966"

When packaged and shipped by Entel these batteries meet the requirements for transport by Air (IATA) , Sea (IMDG), Road (ADR) and Rail (RID), it is the shippers responsibility to determine and ensure that any subsequent shipments meet the requirements in place at the time

**NOTE:** Battery packs identified as defective, or have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for air transport.

For different modes of transport please refer to the relevant regulations:

Air Freight – IATA

Road Freight - ADR

Sea Freight - IMDG

### **Other Information**

- The information contained in this Safety data sheet is made in good faith and is based on the present state of knowledge and current legislation. Entel disclaims all liability in respect of the information implied or expressed. Equivalent information is available from the cell manufacturer.