Declaration

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Herewith we, BARTEC GmbH, declare

that we use type no. B7-A2Z0-0045 and B7-A2Z0-0053 (customer replaceable) battery pack for Touch Computer TC75^{ex} and TC75x^{ex} series.
The battery pack includes Lithium Ion battery cells.
Cell is manufactured by Maxell. The battery pack is manufactured by Palladium Energy Inc.

Battery packs related to product:
Battery pack type B7-A2Z0-0045
Touch Computer TC75^{ex} series (type no.'s B7-A264-1x11/xxxxxxxx).
Battery pack type B7-A2Z0-0053
Touch Computer TC75x^{ex} series (type no.'s B7-A264-1x32/xxxxxxxx).

Type number:	**B7-A2Z0-0045**	**B7-A2Z0-0053**
SAP:	418645	430548
Related product:	TC75^{ex} B7-A264-1x11/xxxxxxxx	TC75x^{ex} B7-A264-1x32/xxxxxxxx
Zebra Reference number:	82-171249-02	
Zebra sub supplier:	Inventus Power or TWS Technology (Guangzhou) Limited	Inventus Power
	(Battery for ATEX, IECEx Zone 2 and CSA Class I Division 2 certified Touch Computer TC75^{ex} or TC75x^{ex} series)	
Technical data:	Lithium Ion Battery 3.7 V / 4620 mAh / 17.09 Wh	
Weight:	approx. 0.125 kg	
Dimension:	94 x 72 x 15 mm	
UN 38.3 Test Report:	Passed	
Proper Shipping Name:	Lithium Ion Batteries	
Class:	9	
UN Classification 3480:	Shipping of Lithium ion batteries (limited to a maximum of 30% SoC) Shipping of single batteries without equipment.	
UN Classification 3481:	Shipping of Lithium ion batteries: "packed with equipment" or "contained in equipment"	

Declaration

Related to this declaration is following documentation:

- For BARTEC type number B7-A2Z0-0045 and B7-A2Z0-0053
  Inventus Power SAFETY DATA SHEET
  Date: 2020-01-03 / Reference Number: SDS_6199_QX_R03

- For BARTEC type number B7-A2Z0-0045
  TWS Technology (Guangzhou) Limited SAFETY DATA SHEET
  Date: 2019-12-30 / Reference Number: TWS-IMS-QE-20200083

Bad Mergentheim, March, 20th 2020

BARTEC GmbH

i. A.

Sarah Springer

Product Manager Enterprise Mobility

Type number:

- B7-A2Z0-0045
- B7-A2Z0-0053

Inventus Power

SAFETY DATA SHEET

Date: 2020-01-03

Reference Number: SDS_6199_QX_R03

File Number: SDS_6199_QX_R03
Date: 2020-01-03

SAFETY DATA SHEET

Section 1 -- Product and Company Identification

PRODUCT IDENTIFICATION

Product Name: Rechargeable Lithium Ion Batteries

Product Model No.: 82-171249-02

COMPANY NAME:

Inventus Power, Inc.

1200 Internationale Parkway, Woodridge IL 60517

Emergency telephone number:

Inside the US: 1-800-535-5053

Outside the US: 001-352-323-3500

MANUFACTURER:

ICC Electronics (Dongguan) Ltd.

No.23, Shang Yuan Road, QingXi Town, Dongguan City, Guangdong Province, China

Telephone number: +86 769 87731085

Section 2 -- Composition / Information on Ingredients

Lithium-Ion Single Cell Matrix

Cell PN	Cell Model	Type (lithium Ion or polymer)	Voltage(V)	Capacity (Ah)	Cd/Hg/Pb (Yes/No)
NA	ICP494261SRU	Li Ion	3.7	1.54	No

Battery Product Matrix

Inventus Power P/N	Customer P/N	Pack Configuration	Pack Nominal Voltage V	Pack Nominal Capacity (Ah)	Pack Energy (Wh)
--	--	1S3P	3.7	4.62	17.1

Chemical Composition:

Component	Material	Formula	CAS Number	Percentage range (wt %)
Positive Electrode	Lithium Manganese Cobaltate (Li-Mn-CoO_2)	--	12190-79-3	<41
Negative Electrode	Graphite (C)	--	7440-44-0/7782-42-5	<20
Electrolyte	Organic Carbonate – Solvent ($C_3H_4O_3$ or similar)	--	--	<16
	Lithium Hexaflurophosphate – Salt ($LiPF_6$)	--	--	<16
Copper	Cu	--	7440-50-8	Remainder
Iron	Fe	--	7439-89-6	Remainder
Aluminum	Al	--	7429-90-5	<22

Section 3 -- Hazards Identification

Under normal usage, there is no contact with electrolyte and no hazard exists.
If exposed to high temperature or fire, cell may leak electrolyte and in extreme cases explode. The vented gas may contain among others Hydrogen Fluoride.

Section 4 -- First Aid

Under normal operating condition, contents of the cells are in sealed (polymer pouch/metal can or cylinder) condition and pose no threat to the user.
Exposure to the cell internal content happens under abusive conditions.

Inhalation: Contents of open battery may cause respiratory irritation. Move to fresh air immediately and seek medical attention.
Skin: Contents of open battery may cause skin irritation. Wash skin with copious amount of soap and water.
Eye: Contents of open battery may cause eye irritation. Flush eyes immediately with water for at least 15 minutes and seek medical attention.
Ingestion: Seek medical attention immediately. Induce vomiting.

Section 5 -- Fire Fighting

In case of Fire use CO_2 or CLASS D fire extinguisher
In case battery burns with other combustible, use corresponding fire extinguisher.
Corrosive fumes may be present during fire. Use protective equipment (gloves, breathing apparatus, goggles etc.)
Gases from the burning fire will include Hydrogen Fluoride, Carbon oxides, Hydrocarbons among others.

Section 6 -- Accidental Release

Battery material is enclosed in either metal casing or in laminate and does not release easily under normal usage. Under abuse condition such as puncture, high heat exposure, electrical abuse electrolyte containing vinyl chloride salt in organic solvent may leak out. See section 4 for first aid measure. Seek medical attention.

Section 7 -- Instructions on Safe Handing and Use

Storage: Store within the recommended temperature limit of the battery (read instruction manual for specific limits). Do not expose to high temperature (60 ºC/140 ºF). Avoid short circuit of the battery. Short circuit of the battery may cause release of gas and may pose burn hazard.

Handling: Do not disassemble, crush or otherwise abuse the battery. Do not open the battery.

Charge: Charge only with dedicated/specific chargers designed for this battery

Discharge: Discharge within the temperature limits of the battery detailed in the specification.

Disposal: Dispose/Recycle according to the applicable municipal, state and federal regulations. Do not dispose in household or commercial waste bin.

Caution: This battery when abused may pose fire, explosion and severe burn hazard. Handle with caution.

Section 8 -- Exposure Control and Special Protection Information

・Control parameters

Common chemical name / General name	ACGIH (2009)	
	TLV-TWA	BEI
Lithium transition metal oxidate	0.02mg/m^3 (as cobalt) * 0.2mg/m^3 (as manganese) * 0.2 mg/m^3 (as nickel) *	-
Aluminum	10mg/m^3 (metal coarse particulate) 5mg/m^3 (inflammable powder) 5mg/m^3 (weld fume)	-
Carbon (Natural graphite) (Artificial graphite)	2mg/m^3 (inhalant coarse particulate)	-
Copper	0.2mg/m^3 (fume) 1.0mg/m^3 (a coarse particulate, Mist)	-
Organic electrolyte	-	-

ACGIH: American Conference of Governmental Industrial Hygienists, Inc.
TLV-TWA: Threshold Limit Value-Time Weighted Average concentration
BEI: Biological Exposure Indices

Eye Protection, gloves, ventilation, are not needed under normal usage

Use safety goggles, acid resistant safety gloves, air mask if exposed to internal content of the cell/battery.

Section 9 -- Physical and Chemical Properties

Appearance: Solid

Form Factor: Mostly cylindrical

Odor: N/A

PH: N/A

Flash Point: N/A

Density: N/A

Solubility: Insoluble in Water

Section 10 -- Stability and Reactivity

Not reactive under normal condition of usage.

Note safe handling procedure.

Avoid high temperature and mechanical abuse.

Read label and manufacturer instruction before usage.

Section 11 -- Toxicological Effect

Acute Toxicity:

Not known for Lithium Cobaltate, Aluminum, and Graphite.

Copper causes gastrointestinal disturbance in 60-100mg sized coarse particulate.

TDLo- Rabbit 375mg/kg

Organic electrolyte LD50, oral - -Rat 2000mg/kg or more

Local Effects:

Not known for Lithium Cobaltate, Graphite and Organic Electrolyte.

Aluminum has no known local effects.

Copper in coarse particulate is eye irritant

No known carcinogen in this product.

Section 12 -- Ecological Information

Battery is not biodegradable. Do not dispose in landfill.

Section 13 -- Disposal Information

Dispose/Recycle according to the applicable municipal, state and federal regulations.
Do not dispose in household or commercial waste bin.

Section 14 -- Transportation Information

Battery Pack
Proper Shipping Name: Lithium Ion Batteries.
The UN number for the battery pack is UN3480, and it also can be UN3481 when the battery pack contained in the equipment or packed with the equipment.
The battery meets the requirements of the test in the United Nations (UN) Manual of Tests and Criteria, Part III, sub-section 38.3
DOT: Refer to Attachment ERG 2016 guide 147 (Lithium Ion battery Guide)
IMDG: Refer to IMDG/Ocean Transport ENS F-A, S-I
IATA: Refer to IATA-ICAO/Air Transport ERG CODE 12FZ
When large amount of batteries is transported by ship, vehicle and railroad, avoid high temperature and dew condensation.
Avoid transportation which may cause damage of package.

Section 15 -- Regulatory Information

The transport of rechargeable lithium-ion batteries is regulated by various bodies, (IATA, IMO, US-DOT)
That follow the United Nations “Recommendations on the Transport of Dangerous Goods.
Regulations specifically applicable to the product:

ICAO 2019/2020 Edition of ICAO Technical Instructions for the Safety Transport of Dangerous Goods by Air

IMO IMDG Amendment 39-18 2018 Edition. And the battery pack complies with the special provision 188 of the IMDG CODE.

IATA 61st Edition (2020) of the IATA Dangerous Goods Regulations (DGR)

US Department of Transportation DOT (49 CFR 100-185), (USA)

OSHA hazard communication standard (29 CFR 1910.1200)

_____ Hazardous __V__ Non-Hazardous

The battery meets the requirements of Packing Instructions 965,

Section II and section IB of the IATA regulation.

Section 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.

Type number:

- B7-A2Z0-0045

TWS Technology (Guangzhou) Limited

SAFETY DATA SHEET

Date: 2019-12-30

Reference Number: TWS-IMS-QE-20200083

MATERIAL SAFETY DATA SHEET

File S/N: TWS-IMS-QE-20200083 Issue Date: 2019-12-30

We would like to inform our customers that these batteries are exempt articles and are not subject to the 29 CFR 1910.1200 OSHA requirements, or to the Canadian WHMIS requirements and the sheets are supplied as a service to you.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	Rechargeable Li-ion Battery
Model	82-171249-02
Rating	3.7V 4620mAh 17.1Wh(Typ.)/4500mAh 16.7Wh(Min)
Company:	TWS Technology (Guangzhou) Limited
Address:	No.39 Nanyunsan Road, Science Park, Hi-Tech Industrial Development Zone Guangzhou,P.R.China,510663
Manufacturer:	TWS Technology (Guangzhou) Limited
Address:	No.39 Nanyunsan Road, Science Park, Hi-Tech Industrial Development Zone Guangzhou, P.R. China. 510663
Telephone no.	+ 86-20-22215111
Fax no.	+86-20-22215113

2. COMPOSITION/INFORMATION ON INGREDIENTS

Battery Cell

MATERIAL OR INGREDIENTS	Content (wt %)	CAS #
Lithium Cobalt Oxide (LiCoO2)	less than 41wt%	12190-79-3
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

Circuit Module

HAZARDOUS INGREDIENTS	%/wt	CAS #
Lead	<0.1	7439-92-1
Mercury	0	7439-97-6
Chromium	0	7440-47-3
Cadmium	0	7440-43-9
Plastic case and Si2O	0	N/A

Plastic Parts and Paints

HAZARDOUS INGREDIENTS	%/wt	CAS #
Polycarbonate	More than 81 wt%	103598-77-2
Flame Retardant	Less than 12 wt%	N/A
Elastomer	Less than 7 wt%	N/A

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

PRIMARY ROUTES OF ENTRY

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

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

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

INGESTION

If swallowed, obtain medical attention immediately.

If exposure to internal materials within cell(pack) due to damaged outer casing, 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 fire fighting area. If heated above 125°C, cell(s) can explode/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 cells.

7.2 STORAGE

Store in a cool dry place.

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

Respirator: Not required during normal operations. 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.

Foot protection: Steel toed shoes recommended for large container handling.

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

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in Appendix of TCO documents and relevant international ECO requirements:

Polybrominated Biphenyl (PBB)
Polybrominated Diphenyl Ethers (PBDE)
Polychlorinated Biphenyls (PCBs)
Polychlorinated Triphenyls(PCTs)
Polychlorinated Naphthalene (PCN)
Short Chain Chlorinated Paraffins (C10-C13)
Chlorofluorocarbons(CFCs)
Polyvinyl Chloride(PVC)
Carbon Tetrachloride

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

12. ECOLOGICAL INFORMATION

The batteries do not contain mercury, cadmium or other heavy metals.

13. DISPOSAL CONSIDERATIONS

Dispose by incineration or burial at permitted waste treatment and/or disposal sites.

Batteries do not contain hazardous materials according to EC directives 2013/56/EU and 93/86/EEC.

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* (2019~2020 Edition)
- The International Air Transport Association (IATA) *Dangerous Goods Regulations* (61th 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 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.

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.

End of Safety Data Sheet