TRACER®
HIGH PERFORMANCE BATTERIES

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SAFETY DATA SHEET
LITHIUM ION POLYMER (LiPo) BATTERIES

1 PRODUCT INDENTIFICATION

Product name:Lithium Ion polymer rechargeable batteries. Model numbers BP2541, BP2544, BP2545. BP2546 & BP2548.

2 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CONTENT (% of Weight)	CAS No.	EINECS
Lithium Cobalt Oxide (LiCoO2)	50%	12190-79-3	235-362-0
Carbon (Graphite)	10%	7782-42-5	231-955-3
PP	5%	9003-07-0	NA
PVDF	2%	24937-79-9	NA
PE	5%	9002-88-4	NA
CMC	0.5%	9004-32-4	NA
LiPF6	5%	21324-40-3	244-334-7
EC	5%	96-49-1	202-510-0
DMC	5%	616-38-6	210-478-4
Ni	2.5%	7440-02-0	231-111-4
Cu	5%	7440-50-8	231-159-6
Al	5%	7429-90-5	231-072-3

3 HAZARDS / HEALTH IDENTIFICATION

Intact batteries present no specific hazards. If batteries show signs of leaking, AVOID skin or eye contact with the material leaking from the battery. If battery is burning, put out the fire by using right extinguisher.

Potential Health Hazards:

Human health effects:

- Eye contact: No particular hazards during proper use. It will cause severe irritation or chemical burns if batteries are damaged and leaking.
- Skin: No particular hazards during proper use. It will cause skin severe irritation by inhalation of EC and DMC or chemical burns if batteries are damaged and leaking.
- Inhalation: It will irritate breathing system if being exposed to fumes, if batteries are damaged and leaking.
- Ingestion: No particular hazards during proper use. If batteries are damaged and leaking, ingestion of the chemicals will cause severe chemical burns to mouth, esophagus and gastro enteric system.

Environment hazards: Do not throw out into the environment - dispose of responsibly.

Burning and exploding hazards: If the battery is short-circuited, over charged or over heated, it may cause electrolyte to leak out of the battery, or the battery may explode or catch fire.

4 FIRST-AID MEASURES

Skin Contact: Wash the affected area for at least 15-30 minutes with clean water, and seek medical attention immediately.

Eye contact: Wash the affected area with clean water, and seek medical attention immediately. Inhalation: Move to a clean air area, wash oral cavity and nasal cavity, and seek medical attention immediately.

Ingestion: If the sufferer is conscious, feed him/her some water and milk, do not induce to vomiting, and seek medical attention immediately.

5 FIRE-FIGHTING MEASURES

Hazard properties: The battery may over-heated from outside and internal short-circuit, and burning batteries may emit toxic fumes.

Hazardous Combustion products: Metallic oxide, Carbon oxide (CO), Carbon dioxide (CO2), etc.

Extinguishing Media: Species D fire extinguishers of chemical dry powder, yellow sands. DO NOT use water.
Firemen safeguard: Firemen should wear fire-fighting suits with a self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURE

Splash/leakage: Remove any source of fire and heat. Collect the leaked battery and place it into appropriate vessel for reclaiming and discarding according to correlative native and local laws, regulations and environmental protection requirements. Avoid vibration and physical damage.

7 HANDLING & STORAGE

Handling:

Specific safe handling advice:

- Do not vibrate the battery excessively.
- Avoid short-circuiting the battery. Though short-circuiting for short time will not damage the battery, doing so for a long time will damage the battery and may overheat the battery causing burns, fire or explosion.
- Do not store or use the battery with objects that could cause a short circuit such as coins, metal objects etc.
- During transportation and storage, ensure effective measures are employed to prevent short- circuit.
- Do not disassemble and damage the battery.
- The battery should be transported with 10-50% charged states.
- Do not soak the battery with water.
- Do not store the battery in direct sunlight.

Storage:

For long time storage, the battery should be 40-60% charged.

The battery should be stored in the place where it is cool and dry - do not store at high temperatures. Do not expose the battery to fire.

8 EXPOSURE CONTROLS & PERSONAL PROTECTION

Engineering control: No information available.

Sanitation measure: No special requirements for handling the battery if it is not damaged.

Respiration protection: No special requirements for handling the battery if it is not damaged.

Eye protection: No special requirements for handling the battery if it is not damaged.

Body protection: No special requirements for handling the battery if it is not damaged.

9 PHYSICAL & CHEMICAL PROPERTIES

Appearance and character:	Solid
Colour:	Cells: Metallic grey Case: Green/black
Odour:	No
Function:	Power supply

10 STABILITY &REACTIVITY

Stability: Stable for normal usage.

Incompatibility (Materials to avoid): Electric materials, water, seawater, oxidant, acid.

Conditions to Avoid: short-circuit, collision, refit, high temperature (over 100°C), direct sunshine and high humidity environment.

Decomposition products: Toxic gas produced when burning.

Hazardous polymerization: Does not occur.

11 TOXICOLOGICAL INFORMATION

CAS NO.	RETCS
12190-79-3	None list
7782-42-5	MD9659600
9003-07-0	UD1842000
24937-79-9	None listed
9002-88-4	TQ3325000;KX3270000
9004-32-4	FJ5950000
21342-40-3	None listed
96-49-1	FF9550000
616-38-6	FG0450000
7440-02-0	QR5950000;QR6126100;QR6555000;QR7120000
7440-50-8	GL5325000;GL7440000;GL7590000
7429-90-5	BD0330000;BD1020000

Ingredients: hydroxide methyl cellulose sodium

- LC50: > 5800 mg/m3/4h
- LD50: > 27 g/kg

Ingredients: LiPF6

- LD50: > 1702 mg/kg

Ingredients: Ethylene carbonate

- LD50: > 10000 mg/kg
- LD50: > 3000 mg/kg

Ingredients: Dimethyl carbonate

- LD50: > 6000 mg/kg
- LD50: > 13000 mg/kg

Irritation: NA

Carcinogenicity:
Ingredients: Nickel

- LARC-2B: potential carcinogen
- ACGIH A5: non-human carcinogen

Other substances: Not be listed under ACGIH, IARC, NTP

12. ECOLOGICAL INFORMATION

Ecological toxicity: the chemicals of the battery will cause harm to the environments if it is discarded to the surroundings.

Biodegradability : No information available.

Non- biodegradability : No information available.

13. DISPOSAL

Disposal means: According to national and local laws and regulations.

14. TRANSPORT INFORMATION

Shipping Class: 9

UN Number: UN3480

For transport by Air: Refer to the regulations of IATA DGR

For transport by Sea: Refer to the regulations of IMDG CODE

For transport by Road: Refer to the regu-lations of ADR.

15 REGULATORY INFORMATION

The following regulations are specifically applied to the safe usage, production, storage, transport and load and unload for dangerous chemicals.

- The Regulations of Safe Management Regarding Dangerous Chemicals (issued by State Council at 16/02/2011)
- The Rules of implementation of Safe Statute Regarding Dangerous Chemicals (No.667 ,1992)
- The Regulations of Safe Use of Dangerous Chemicals in Workplace(No.423,1992)

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.