

1. Identification of the Product and of the Company

1.1. Product Information:

Product Name: Rechargeable lithium Ion Battery Pack
 Product reference number: 880/194
 Model N°: 10S2P
 Rating: 36V,5.4Ah,192.4wh

1.2. Manufacturer Information:

FELCO SA
 Rue des Mèlèzes 4,
 Les Geneveys-sur-Coffrane, CH2206 Switzerland
 TEL: +41 32 858 14 66 <http://www.felco.com>
 Date: 2017/10/16 Version: B

2. Composition / Information on Ingredients

English Name: Rechargeable lithium Ion Battery Pack
 Synonymous Name:
 Hazardous Ingredients:

Chemical Name	CAS NO.	Concentration/ Concentration range	Classification and Hazard labeling
Lithium Cobaltic (LiCoO ₂)	-	20-40%	-
Iron	7439-89-6	15-25%	-
Aluminum	7429-90-5	2-6%	-
Graphite (Natural graphite) (Artificial graphite)	7482-42-5 7740-44-0	10-20%	-
Copper	7740-50-8	5-15%	Sensitization of the skin group No.2
Organic electrolyte	7429-90-5	10-20%	Inflammable liquid

Lithium equivalent content : 16.2[g] for battery pack

3. Hazards Identification

- Health Hazard Effect:
The battery pack interior contains an airtight chemical substance, if the artificial/machinery/electron damage or improper use cause the chemical substance or gas to leak or explode this can cause bodily harm to exposed body parts, skin and eyes.
- Environment Influence / Impact:
Since a battery cell remains in the environment, do not dispose of it into the environment. Batteries must be recycled at a battery recycling center.
- Physics/Chemical damage: -----
- Special damage: -----
- Cardinal Injury Condition:
Nausea, vomit, disorientation, skin irritation or burns.
- Article damage classification: -----

4. First Aid Measures

Under normal conditions of use, the battery is hermetically sealed but in case of any battery chemical or gas leakage there are specific First Aid Measures:

1. Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately.
2. Inhalation: Contents of an open battery can cause respiratory irritation. Inhalation of vapors may cause irritation of the upper respiratory tract and lungs. Provide fresh air and seek medical attention.
3. Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns. Remove contaminated clothing and wash skin with soap and cool water. If a chemical burn occurs or if irritation persists, seek medical attention.
4. Eye Contact: Contents of an open battery can cause severe irritation and chemical burns. Immediately flush eyes thoroughly with cool water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.
5. In all cases of contact with battery chemicals or gas it is always recommended to seek medical attention as soon as possible.

Emergency Contact : Carechem 24 hour-phone +44(0)1865 40 73 33

5. Fire Fighting Measures

- If fire or explosion occurs when battery are on charge, shut off power to charger and charger. In case of fire where lithium ion battery is present, flood the area with water. If any battery is burning, water may not extinguish them, but will cool the adjacent battery and control the spread of fire. CO₂, chemical, and foam extinguishers are preferred for small fires.
- Extinguishers : water/CO₂/dry chemical/foam

6. Accidental Release Measures

- Personal protection :
 1. Respiratory Protection: Not necessary under normal conditions.
 2. Eye Protection: Not necessary under normal conditions. Wear safety glasses with side shields if handling an open or leaking battery.
 3. Gloves: Not necessary under normal conditions. Use neoprene or natural rubber gloves if handling an open or leaking battery
- Ventilation Requirements: Not necessary under normal conditions

7. Handling and Storage

- Handling :

Do not expose the battery to excessive physical shock or vibration. Short-circuiting should be avoided.

Prolonged short circuits will cause the battery to rapidly lose energy, could generate enough heat to burn skin. Sources of short circuits include jumbled batteries with metallic materials and excessive battery contact (coins, metal jewelry, metal covered tables, or metal belts). used for assembly of battery in devices. To minimize risk of short-circuiting, the protective case supplied with the battery should be used to cover the terminals when transporting or storing the battery. Do not disassemble or deform the battery.

- Storage :

Store in cool place (temperature: +5°C ~ 20°C / +41°F ~ 68°F, humidity: 45 ~ 85%).

8. Exposure controls

- ENGINEERING CONTROLS -----

Control parameter		
Common chemical name/General name	TLV-TWA	BEI
Lithium Cobaltic (LiCoO ₂)	0.02mg/ m ³ (as cobalt)	-
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	-	-

9. Physical and Chemical Properties

Physical state	(Solid)	(Solubility in water)	/
Cell Color	(Metallic color)	(Explosion limit)	/
Odor	(Odorless)	(Auto flammability)	/
Flashpoint	/	(Melting Point)	LiCoO ₂ about 1130°C / 2066°F
Boiling Point	/	(Freezing Point)	/

10. Stability and Reactivity

- Stability:
Stable under normal use
- Reactivity:
Avoid contact with water and acids

11. Toxicological Information

Under normal conditions of use, the battery is toxicologically sealed. So avoid opening, and impact that can damage the battery.

12. Ecological Information

If the battery is to be disposed of, it should be collected and disposed/recycled by a certified battery disposal/recycling company.

13. Disposal Considerations

Do not dispose of battery into environment. It should be recycled and disposed of according to local legislation and regulations.

14. Transportation Information

The lithium battery pack comply with IATA DGR 58th edition lithium ion battery UN3480 Section IA of Packing Instruction 965. A lithium battery label must be placed on the package when the statement is required.

15. Regulatory Information

(ACGIH)
(OSHA)
European Union (UN)
(ISO)

16. Other Information

- Reference : PANASONIC LI-ION CELL BATTERY MSDS
Made by: Skypower Ent. Co., Ltd.
- 3F, No. 248-30, Xincheng Rd., Qianzhen Dist., Kaohsiung City 806, Taiwan.
TEL: +886-7-8418528 www.skypowertek.com/
Note: The reference data provide from supplier.