

Material Safety Data Sheet
 may be used to comply with
 OSHA's Hazard Communication Standard.
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

IDENTITY (As Used on Label and List)

Lithium Ion Rechargeable Cell LPCS5260106 (3 Ah)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Manufacturer's Name

SKC Co., Ltd.

Address (Number, Street, City, State and Zip Code)

#460 Chonhung-Ri, Songgo-Ub, Chonan-City,
 Chungchongnam-Do, 330-830 Korea

Telephone Number for Information

973-448-2394

Date Prepared

January 29, 2003

Signature of Preparer (optional)

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

		CAS #
Lithium Cobalt Oxide.....	30 - 40%.....	12190-79-3
PVDF.....	1 - 5%.....	24937-79-9
Carbon.....	10 - 30%.....	7440-44-0
PTFE.....	0.1 - 0.5%.....	9002-84-0
Electrolyte (EC/EMC/DEC/PC/1molLiPF6).....	15 - 20%.....	See components in Section III (1) & (2)
PP+PE.....	2 - 3%.....	9003-07-0, 9002-88-4
Copper.....	10 - 15%.....	7440-50-8
Aluminum.....	10 - 15%.....	7429-90-5
Nickel.....	0.1 - 0.5%.....	7440-02-0

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
(1) Organic solvents: Ethylene-Carbonate (CAS: 96-49-1) + Methyl-Ethyl-Carbonate (CAS: 623-53-0) + Diethyl-Carbonate (CAS: 105-58-8) + Propylene Carbonate (CAS: 108-32-7)			12g/cell	
(2) Lithium Salt LiPF6 (CAS: 21324-40-3)			1.8g/cell	
(3) Cobalt Oxide Compound (Non-flammable)			24g/cell	

Hazard Rating

Description	CAS #	Health	Fire	Reactivity
Ethylene Carbonate	96-49-1	2	1	1
Methyl-Ethyl Carbonate	623-53-0	1	3	0
Diethyl Carbonate	105-58-8	1	3	1
Propylene Carbonate	108-32-7	1	1	1
Lithium Salt	21324-40-3	3	0	0

*These chemicals of the cell are firmly sealed within Al laminated film case.

*The cell contains neither metallic lithium nor lithium alloy.

*Organic Solvents: Inflammable { UN Number 1993

UN Class 3

SECTION IV – PHYSICAL/CHEMICAL CHARACTERISTICSSpecific Gravity (H₂O=1)LiCoO₂: 4.95

Carbon: 2.2

Electrolyte: 1.2

Melting Point (degree C)

LiCoO₂: about 1130 degrees C

Flash Point (degree C)

Organic Electrolyte Solution: 23°C as EMC, 157°C as EC, 132° as PC, 33°C as DEC

Appearance and Odor

LiCoO₂: black odorless powder

Organic Electrolyte: colorless liquid, ester odor

Carbon: black odorless powder

*These chemicals of the cell are firmly sealed within Al laminated film case so the cell is odorless.

SECTION V – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Between 23°C and 157°C	No data	No data	No data
Extinguishing Media CO2, Sand			
Special Fire Fighting Procedures No special fire fighting procedures		Basic Fire Fighting Procedures Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.	
Unusual Fire and Explosion Hazards This material does not represent an unusual fire or explosion hazard.			

SECTION VI – REACTIVITY DATA

Stability Stable	Unstable		Conditions to Avoid: Short-circuit, heating, overcharging and contacting water shall be avoided.
	Stable	X	
Incompatibility (Materials to Avoid) Avoid contact with water.			
Hazardous Decomposition or Byproducts Combustion may produce CO, H ₂ , CO ₂ , LiF, HF, H ₃ PO ₄ , HFP, PF ₃			
Hazardous Polymerization Will not occur	May Occur		Conditions to Avoid: N/A
	Will Not Occur	X	

SECTION VII - HEALTH HAZARD DATA

Route(s) of Entry	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes
Health Hazards (Acute and Chronic):			
If vapor of electrolyte is inhaled, it may damage bronchial tubes, skin, lungs and throat.			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	N/A	None	None
Signs and Symptoms of Exposure:			
If electrolyte leaks, it absorbs humidity and generates irritant HF gradually.			
Medical Conditions generally aggravated by exposure:			
Leaked electrolyte may irritate bronchial tubes, skin and eyes.			
Emergency and First Aid Procedures:			
Wash out in abundant water.			

SECTION VIII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:
Wash electrolyte out in abundant water.
Waste Disposal Method:
Dispose of according to appropriate local, state and federal waste regulations.
Precautions to be taken in handling and storing:
Keep batteries in a dark and cool place. Short-circuit shall be avoided.
Other Precautions:
Incineration, overcharging and disassemble shall be avoided.

SECTION IX - CONTROL MEASURES

Respiratory Protection (specify type):
Not necessary under condition of normal use
Ventilation:
Not necessary under condition of normal use
Protective Gloves:
Not necessary under condition of normal use
Eye Protection:
Not necessary under condition of normal use
Other Protective Clothing or Equipment:
Not necessary under condition of normal use
Work/Hygienic Practices:
Not necessary under condition of normal use