



# Material Safety Data Sheet

No.: SZ11090217R02

Sample Name: Notebook battery

Date: 2011-10-14

*prepared for*

**SHENZHEN HUAQI POWER TECHNOLOGY CO.,LTD**

Floor 2, Building 2,HongPai Industrial Park, Xinhe Sub-District, FuYong Town,  
Bao'an District, Shenzhen City, Guangdong Province, China



**Shenzhen Morlab Communications Technology Co., Ltd.**

**Morlab Laboratory**

3/F, Electronic Testing Building, Shahe Road, Xili,

Nanshan District, Shenzhen, 518055 P. R. China

Tel: +86 755 86130398

Fax: +86 755 86130218

# 1. Chemical Product and Company Identification

## Product Identification

Notebook battery

42C1, 37D1, 44A3, 43D1, 58A1, 58A1H, AC270, AC290, AC2200, AC2200H, AC4000, AC8000, 34A1, 39D1, 63D1, ARJ1, ARJ1H, AC5500, AC5500H, F4000, TM3200, TM3000, AC5920, AC5921, AC4710, AC4710H, AC4710H, AC360, AC-OneS, AC-OneH, AC-OneHH, AC751, AC751H, AC5520, AC5521, AC50L6, AC50L8, 73E1, AC-3810T, AC532, M7426, AC4741, AP1039, AP1079, AP1061, AP1012, AP1078, M8416, AP1175, AP1185, AP1189, AP1280, AP1281, A2, A3, A4, A8, S5, M6, A9T, A9TH, U5F, W1, W3, M3N, M9, M9H, U6, U6H, 701, 701H, 701HH, 901, 901H, F5, F3, F9, S101, U3, U3H, S6F, K40, SQU-524, 1005H, M50, DL6400, DL6400H, DL9200, DL9200H, DL2650, CPI4460, X300, X300H, DL600, DL601, 700M, C400, DL400, DL401, DL410, DL410H, DL420, DL421, DL620S, DL620, DL620H, DL5000, DL5100, DL5100H, X1, LS, 640M, 640MH, DL800, DL800H, DL810, DL810H, DL820, DL820H, DL1000, V1200, M1210, M1210H, DL1300, DL1300H, DL1300HH, DL1301, DL1301H, DL1301HH, DL1330, DL1330H, DL1400, DL1400H, DL1520, DL1520H, DL1525, DL1525H, DL1525HH, DL1530, DL1530H, DL1535, MINI9, DL1535H, MINI9H, MINI10, DL1425, DL1425H, DL1310, DL1310H, DL1730, DL1735, DL1735H, A860, E5400, E6400, E6400H, DL1340, DL1340H, DL1710, DL1710H, DL1464, DL1370, DL4010, MINI12, E4300, DL1640, P700, HP1600, HP1700, NC6000, NC4000, NC4400, N600, TC1000, TX1000, TX1000H, XE2, F4809, F4486, DV1000, DV1000H, DV1000HH, DV2000, DV2000H, DV2000HH, DV3000, DV8000, DV8000H, DV9000, DV9000H, HP2133, F2299, HP500, HP510, HP510H, F2019, F2098A, NC6120, NC6120H, HP6520, ZV5000, ZV5000H, ZD7000, NX7000, NX8200, NX8200H, HP7400, HP7400H, B1200, B1900S4, B1900, B1900H, CQ40, CQ40H, CQ40HH, HP2400, HP2400H, DV7, DV7H, DV70, DV70H, MINI1000, DV2, DV2H, DV3, Mini5101, HP4411S, MINI110, DM3, CQ20, CQ20H, HP6530B, HP6530BH, HP6720S, HP6730S, CQ42, MINI210, HPDM1, HP2730, HP4321, HPB2000, HP4710S, HP4510S, 600, A20, A20H, A21E, A30, R30, R40, R40E, T20, T30, T40, T40H, T60S, T60, T60H, T61, T61H, X20, X30, X30H, X40, X40H, X41T, X60, X60H, Z60T, X61T, X61TH, W700, X200, X200H, X300, E255, N100, N100H, E100, F40, Y510, V100, G400, S10, S10H, K42, U110, G450, Y450, V450, Y460, T410, T410H, G460, U450, S10-2, S10-3, T3285, T3384, T3384H, T3356, T3356H, T5100, T3084, T3191, T3465, T3465H, T3465HH, T3451, T3451H, T3399, T3399H, T3399HH, T3000, T2487, T3383, T3383H, T3395, T3331, T8000, T8100, T3154, T3166, T3450, T3534, T3535, T3536, T3536H, T3634, T3634H, T3634HH, T3479, T3479H, T3783, T3594, T3594H, BP2E, BP2V, BP4V, BPS3, BPS5, BPL5, BPS2, BPL2, BPL2H, BP51, BP2T, BP71, BP2R, BP2NX, BP2S, BPS1, BPS8, BPS8H, BPS8HH, BPS9, BPS9H, BPS9HH, BPS13, BPS13H, BPS22, DR202, A10, X10, X15, X11, P30, NC10, NC10H, MIT898, MIT898H, SQU418, BP8050, BP8050H, F430, UN223, UN243, UN255, UN755,



No .

: SZ11090217R02

SQU409, GW-G600, GW-G400, GW-412, GW-413, SQU-507, NV52, CL-2200, CL-D400, M375, U100, U100H

### Manufacturer

SHENZHEN HUAQI POWER TECHNOLOGY CO.,LTD

Floor 2, Building 2, HongPai Industrial Park, Xinhe Sub-District, FuYong Town,  
Bao'an District, Shenzhen City, Guangdong Province, China

### Emergency Telephone Number

+86 15999519703

## 2. Composition Information

Hazardous Ingredients	%	CAS Number
Lithium Cobalt Nickel	35.76	182442-95-1
Mangeness Oxygen (LiCoO <sub>2</sub> )		
Carbon	23.49	7440-44-0
Copper	14.76	7760-50-8
Aluminum	8.55	7429-90-5
Dimethyl carbonate	6.61	616-38-6
Ethylene carbonate	5.32	96-49-1
Lithium Hexafluorophosphate(LiPF <sub>6</sub> )	2.57	21324-40-3
Polypropylene	1.36	9003-07-0
Poly(vinylidene fluoride)	1.01	24937-79-9
Raney Nickel	0.57	7440-02-0



### 3. Hazards Identification

#### Emergency Overview

May explode in a fire, which could release hydrogen fluoride gas.  
Use extinguishing media suitable for materials burning in fire.

#### Primary routes of entry

Skin contact	: NO
Skin absorption	: NO
Eye contact	: NO
Inhalation	: NO
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.

Reported as carcinogen

Not applicable

## 4. First Aid Measures

### **Inhalation**

Not a health hazard

### **Eye contact**

Not a health hazard.

### **Skin contact**

Not a health hazard.

### **Ingestion**

If swallowed, obtain medical attention immediately.

### **IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL 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 15min.

#### **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

### **General Hazard**

Cell is not flammable. Combustion products include, but are not limited to Hydrogen fluoride, carbon monoxide and carbon dioxide.

### **Extinguishing Media**

Use extinguishing media suitable for the materials that are burning

**Special Fire fighting Instructions**

If possible, remove cell(s) from fire fighting area, If heated above 160°C, cell(s) may explode/vent.

**Fire fighting Equipment**

Use NIOSH/MASHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

**6. Accidental Release Measures****On land**

Place material into suitable containers and call local fire/police department

**In water**

If possible, remove from water and call local fire/police department.

**7. Handling and Storage****Handling**

No special protective clothing required for handling individual cells.

**Storage**

Store in a cool, dry place.

**8. Exposure Controls /Personal Protection****Engineering control**

Keep away from heat and open flame. Store in a cool dry place.

**Personal Protection**Respirator

Not required during normal operations. SABA required in the event of a fire

Eye/face protection



Not required 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

### Reactivity

None.

### Incompatibilities

None during normal operation. Avoid exposure to heat, open flame, and corrosives.

### Hazardous Decomposition Products

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

### 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	Teratogenicity	Reproductive toxicity	Acute toxicity
NO	NO	NO	NO

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

## 12. Ecological Information

Some materials within the cell are bio-accumulative. Under normal conditions, These materials are contained and pose no risk to persons or the surrounding environment.

## 13. Disposal Considerations

California regulated debris  
RCRA Waste Code: Non-regulated  
Dispose of according to all federal, state, and local regulations.

## 14. Transport Information

In the case of transportation, confirm no leakage and no overspill from a container. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a pack. Please refer to Section 7-HANDLING AND STORAGE also.

Codes and classifications according to international regulations for transport Air  
International Air Transport Association (IATA) Dangerous Goods Regulations 2012 (53rd Edition)

IATA-DGR : special provision A88, A99, A154, A164

The UN classification number : Class 9 3480 / 3481

Packing Instruction PI965- PI 970/ Section II for Lithium ion battery.

Each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests and Criteria, Part III, subsection 38.3

However, since it corresponds to special provision A88, A99, A154, A164 of ICAO&



IATA-DGR, this battery pack can be conveyed normally.

## 15. Regulatory Information

OSHA Hazard communication standard (29 CFR 1910.1200)  
Hazardous V Non-hazardous

## 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.

### Reference

Chemical substances information: Japan Advanced Information center of Safety and Health International Chemical Safety Cards (ICSCs):  
International Occupational Safety and Health Information Centre (CIS)  
1999 TLVs and BEIs: American Conference of Governmental Industrial Hygienists (ACGIH)  
Dangerous Goods Regulations –52th Edition Effective 1 January 2011:  
International  
Air Transport Association (IATA)  
Regulations specifically applicable to the product: IATA UN No. 3480 / 3481 Special prevision A88, A99, A154 and A164



Checked by: Yao Yanfen

Oct. 14. 2011

Approved by: [Signature]

Oct. 14, 2011