



SECTION 1: IDENTIFICATION

1.1 Product identifier

Product name:	APC Rechargeable Lithium Ion Battery Pack and products containing these packs
Other names:	APC Smart-UPS Ultra Lithium Ion Battery Pack 1U
Model Numbers:	SRTL50RMBP1U-LI
Region	NAM
Product type:	Battery pack is a manufactured article consisting of a plastic and metal sealed case containing electronics and cylindrical lithium-ion battery/cells. Solid.
Picture of product covered by this safety data sheet	 

1.2 Relevant identified uses of the substances or mixture and uses advised against

Relevant identified use(s): Electric Storage Battery
Use(s) advised against: Not applicable

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer:	Schneider Electric IT USA, Schneider Electric IT Corp., (formerly APC by Schneider Electric, APC Sales and Service Corp.)
Address:	SEIT US - 70 Mechanic Street, Foxboro, MA United States
Telephone:	+1 800-788-2208 or +1 401-789-5735
E-mail:	http://nam-en.apc.com/app/ask
Site web:	www.apc.com

1.4 Emergency telephone number (with hours of operation)

For all Service, Technical Support and Emergency Inquires.
+1-813-248-0585 CHEMTEL MIS0002494

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification Categories

While this material is not considered hazardous by pursuant to GHS Classification Categories, OSHA Hazard Communication Standard (29 CFR 1910.1200) this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for available for employees and other users of this product.

2.1 Classification of the substance or mixture

According to OSHA 29 CFR 1910.1200:

Not applicable under normal use in accordance with United Nations Conference on Environment and Development (UNCED)

2.2 Label elements

Signal Word: NONE


Not applicable under normal use in accordance with United Nations Conference on Environment and Development (UNCED)

Hazard Statements: NONE

Not applicable under normal use in accordance with United Nations Conference on Environment and Development (UNCED)

Precautionary Statements

P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P370	In case of fire: Use carbon dioxide, dry chemicals or water extinguisher.
P402	Store in a dry place
P410	Protect from sunlight.
P501	Dispose of batteries in accordance with applicable hazardous waste regulations

Protective Clothing	NFPA Rating	EC classification	WHMIS (Canada)	Transportation	GHS Hazard Symbol
Not Applicable with normal use		Not classified as hazardous	Not Applicable with normal use	See Section 14	Not Applicable with normal use

2.3 Other hazards

Exposure to contents of an open or damaged cell or battery: contact with this material will cause burnsto the skin, eyes and mucous membranes. May cause sensitization by skin contact.

2.4 Other information

The product is a Lithium-ion battery and is therefore classified as an article and is not hazardous when used according to the recommendations of the manufacturer. The hazard is associated with the contents of the battery. Under recommended use conditions, the electrode materials and liquid electrolyte are non-reactive provided that the battery integrity remains, and the seals remain intact. The potential for exposure should not exist unless the cell in the battery leaks, is exposed to high temperatures or is mechanically, electrically or physically abused/damaged. If the cell in the battery is compromised and starts to leak, based upon the battery ingredients, the contents are classified as Hazardous.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances/Mixtures:

Not applicable

Chemical Name	CAS Number	Composition (%)
Lithium Nickel Cobalt manganese Oxide (LiNiMnCoO2) (NMC)	182442-95-1	33%
Graphite (Carbon)	7782-42-5	17%
Ethyl Methyl Carbonate	623-53-0	3%
Dimethyl Carbonate	616-38-6	7%
Lithium Hexafluorophosphate	21324-40-3	2%
Aluminum	7429-90-5	5%
Copper	7440-50-8	14%
Iron	7439-89-6	19%

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information

The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery and cell casings.

Undamaged, closed cells do not represent a danger to the health.

Eye contact	If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If signs/ symptoms develop, get medical attention.
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Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with one-way valve or other proper respiratory medical device.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.
Ingestion	Induce vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed.

Refer to Section 11 - Toxicological Information

4.3 Indication of any immediate medical attention and special treatment needed.

See section: Description of first aid measures.

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Use CO2 or CLASS D fire extinguisher
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5.2 Special hazards arising from the substance or mixture.

Unusual Fire and Explosion Hazards	At temperatures over 120°C (248°F) batteries may vent, ignite and produce sparks. May burn rapidly with flare-burning effects. May ignite other batteries in close proximity.
Hazardous Combustion Products	The interaction of water vapor and exposed lithium hexafluorophosphate (LiPF ₆) may result in the generation of hydrogen and hydrogen fluoride (HF) gas. Contact with battery electrolyte may be irritating to skin, eyes and mucous membranes. Thermal degradation may produce hazardous fumes of lithium, cobalt and manganese, hydrofluoric acid, hydrogen and oxides of carbon, aluminum, lithium, copper and cobalt as well and smoke and irritating, corrosive and/or toxic gases. Fumes may cause dizziness or suffocation.

5.3 Special advice for firefighters

In case of fire where lithium-ion cells and batteries are present, flood the area with water. If any cells or batteries are burning, water may not extinguish them, but will cool the adjacent cells or

batteries and control the spread of fire. Carbon Dioxide, dry chemical and foam extinguishers may be preferred for small fires, but also may not extinguish burning lithium-ion cells or batteries. Burning cells or batteries will burn themselves out. Virtually all fires involving lithium-ion cells and batteries can be controlled with water. When water is used, however, hydrogen gas may be evolved which can form an explosive mixture with air. LITH-X (powdered graphite) or copper powder fire extinguishers, sand, dry ground dolomite or soda ash may also be used. These materials act as smothering agents.

5.4 Protective equipment and precaution for firefighters

In case of fire and the release of hydrogen fluoride, it is critical to protect the skin from any contact. Firefighters should wear a self-contained breathing apparatus. Burning lithium-ion cells and batteries can produce toxic fumes including hydrogen fluoride (HF), oxides of carbon, aluminum, lithium, copper and cobalt. Volatile phosphorous Penta fluoride may form at temperatures above 110°C (230°F). Wear adequate personal protective equipment as indicated in Section 8.

SECTION 6: ACCIDENTAL RELEASE

The information in this section contains generic advice and guidance. Battery material is enclosed in casing and does not release easily under normal usage.

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact.
For emergency responders	Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. Keep unauthorized personnel away. Wear adequate personal protective equipment as indicated in Section 8.

6.2 Environmental precautions

Environmental precautions	Do not discharge into the drains/surface waters/groundwater.
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6.3 Methods and materials for containment and cleaning up.

Spill	Spills may be absorbed on non-reactive absorbents such as Vermiculite. Place cells into individual plastic bags and then place into appropriate containers and close tightly for disposal. Ensure that cleanup procedures do not expose spilled material to any moisture. Immediately transport closed containers outside. Lined steel drums are suitable for storage of damaged cells until proper disposal can be arranged.
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SECTION 7: HANDLING AND STORAGE

The information in this section contains generic advice and guidance. Battery material is enclosed in casing and does not release easily under normal usage.

The Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Observe good industrial hygiene practices. Wash hands after handling.
Advice on safe handling	Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble. Protect against fire and explosion. Keep away from open flames, hot surfaces and sources of ignition. Do not mix new and used batteries. Do not immerse cell or batteries in liquids
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat and ignition sources. To minimize any adverse effects on cell and/or battery performance, it is recommended that the cells and/or batteries be kept at room temperature (25°C +/- 5°C). Elevated temperatures can result in shortened cell and/or battery life. Keep out of reach of children. Store away from incompatible materials, see Section 10 of the SDS.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

United States Occupational exposure limits / Canada

None. Airborne exposures to hazardous substances are not expected when the cells or batteries are used for their intended purposes. Exposure standards are not applicable to the sealed articles.

Appropriate engineering controls	Special ventilation is not required when using these products in normal use scenarios. Ventilation is required if there is leakage from the cell or battery.
Environmental exposure controls	No specific precautions necessary.

Individual protection measures

Hygiene measures	When using do not eat, drink or smoke. Wash hands before breaks and after work. Have a safety shower or eye wash station readily available
Eye/face protection	Eye protection is not required when handling cells or batteries during normal use. Wear safety glasses/goggles if handling a leaking or ruptured cell or battery.

Hand protection	Hand protection is not required when handling the cell or battery during normal use. PVC gloves are recommended when dealing with a leaking or ruptured cell or battery.
Body protection	No specific precautions necessary.
Other skin protection	Skin protection is not required when handling the cell or battery during normal use. Wear long sleeved clothing to avoid skin contact if handling a leaking or ruptured cell or battery. Soiled clothing should be washed with detergent prior to re-use.
Respiratory protection	During routine operation, a respirator is not required. However, if dealing with an electrolyte leakage and irritating vapors are generated, an approved half face inorganic vapor and gas/acid/particulate respirator is required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Solid.
Color / Appearance	Various / Battery Pack
Odor	Odorless.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point	Not applicable.
Boiling point	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Lower and upper explosive (flammable) limits	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility in water	Insoluble.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	90°C
Viscosity	Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	The cells and batteries do not pose any further reactivity hazards other than those listed in the following sub sections
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Chemical stability	The cells and batteries are stable under normal conditions of use, storage and transport.
Possibility of hazardous reactions	Keep away from water, strong oxidizing agents, strong reducing agents, strong acids and strong alkalis. Reaction of the leaking electrolyte materials with water may produce flammable and explosive hydrogen gas as well as corrosive hydrogen fluoride gas. Hazardous polymerization does not occur.
Conditions to avoid	Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.
Incompatible materials	Do not immerse in water or other high conductivity liquids.
Hazardous decomposition products	In case of open cells, may decompose to produce hydrogen fluoride, phosphorus oxides, sulfur oxides, sulfuric acid, lithium hydroxide, carbon monoxide and carbon dioxide.
Additional information	No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity	There is no data available.
Irritation/Corrosion	There is no data available.
Sensitization	There is no data available.
Mutagenicity	There is no data available.
Carcinogenicity	The electrolyte contained within the cell or battery is not expected to be a carcinogen. The cathode contains Cobalt and Nickel components. These components are classified as IARC 2B –possibly carcinogenic to humans, however they do not pose a threat when contained in the cell or battery sealed unit.
Reproductive toxicity	There is no data available.
Teratogenicity	There is no data available.
Specific target organ toxicity (single exposure)	The electrolyte contained within the cell or battery is corrosive and is expected to cause respiratory irritation by inhalation. Inhalation of vapors may lead to severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.
Specific target organ toxicity (repeated exposure)	There is no data available.

Aspiration hazard	The cells or batteries are not classified as an aspiration hazard, based on the available data and the known hazards of the components. However, due to the corrosive nature of the product if swallowed, do NOT induce vomiting. If vomiting has occurred after ingestion the person should be observed to ensure that aspiration into the lungs has not occurred and assessed for chemical burns to the gastrointestinal and respiratory tracts.
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Information on the likely routes of exposure: Dermal contact, Eye contact, Inhalation, Ingestion.

Potential acute health effects

Eye contact	The electrolyte contained within the cell or battery is a corrosive liquid and it is expected that it would cause irreversible damage to the eyes. Contact may cause corneal burns. Effects may be slow to heal after eye contact. Correct handling procedures incorporating appropriate eye protection. should minimize the risk of eye irritation.
Inhalation	Inhalation of vapors from a leaking cell or battery is expected to cause severe irritation of the mouth and upper respiratory tract with a burning sensation, pain, burns and inflammation in the nose and throat; there may also be coughing or difficulty breathing.
Skin contact	The electrolyte contained within the cell or battery is a corrosive liquid and it is expected that it would cause skin burns or severe irritation to the skin if not washed off immediately. Correct handling procedures should minimize the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.
Ingestion	The electrolyte contained within the cell or battery is a corrosive liquid. Ingestion of this electrolyte would be harmful. Swallowing may result in nausea, vomiting, diarrhea, abdominal pain and chemical burns to the gastrointestinal tract. During normal usage ingestion should not be a means of exposure.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	The sealed cell or battery does not pose an Ecotoxicity hazard. Cells or batteries under normal use conditions pose no ecotoxicity hazard. In the case of a broken or damaged cell or battery and leakage of the electrolyte, it will react with water and potentially cause damage to flora and fauna if not disposed of properly. See Section 13 of this SDS for proper disposal considerations.
Persistence and degradability	There is no data available.
Bio accumulative potential	There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{oc})	No data available.
Other adverse effects	No known significant effects or critical hazards.

Further information

Solid cells and batteries released into the natural environment will slowly degrade and may release harmful or toxic substances. Cells and batteries are not intended to be released into water or on land but should be disposed or recycled according to local regulations. See section 13 of this SDS for Disposal Considerations.

SECTION 13: DISPOSAL CONSIDERATIONS




Advice on disposal

For recycling consult manufacturer. Cell and battery recycling is encouraged. Cells and batteries should not be released into the environment, do NOT dump into any sewers, on the ground or into any body of water. Do not dispose of in fire. Used cells and batteries should be stored in their original packaging, a plastic bag or with their terminals/contacts taped, to minimize the potential for short-circuiting to occur. Cells and batteries should be fully discharged before being sent for recycling. Do not store used cells or batteries near heat sources, chemicals or food. Do not store or transport used lithium-ion cells or batteries with lead acid batteries as they have different regulatory requirements. Do not break open or damage lithium-ion cells or batteries prior to disposal. Care should be taken at all times to ensure that used cells or batteries are not damaged during storage or transport. Store material for disposal as indicated in Section 7 Handling and Storage.

Contaminated packaging

Unsoiled excess packaging should be disposed of according to any applicable recycling regulations and is not considered hazardous waste. Soiled packaging or packaging exposed to the interior of a lithium-ion cell or battery pack should be considered hazardous waste and disposed of according to local hazardous waste rules and regulations.

SECTION 14: TRANSPORT INFORMATION

	ADR/US DOT	IMDG	IATA
UN number	UN3480	UN3480	UN3480
UN proper shipping name	LITHIUM IONBATTERIES	LITHIUM IONBATTERIES	LITHIUM IONBATTERIES
Transport hazard class	9	9	9
Transport hazard Label			
Environmental Hazards	None	None	None
Additional information	<ul style="list-style-type: none"> HAZMAT Bill of Lading (BOL) required via ground or rail, Dangerous Goods Provide emergency response information by including this Safety Data Sheet. If shipped via ground in the USA, an acceptable alternative is to write "ERG 147" on the Bill of Lading. 	Declaration of Dangerous Goods (DGD) is required.	<ul style="list-style-type: none"> Declaration of Dangerous Goods (DGD) is required. Packing Instruction 965 State of Charge (SoC) of the battery must not exceed 30%. Maximum 35 kg (battery weight) net quantity per package (battery weight only; excluding weight of packaging/equipment). Statement on the Air waybill: "Dangerous Goods as per Attached DGD" or "Dangerous Goods as per attached Shipper's Declaration" and « Cargo Aircraft Only » or « CAO »

The following provides information to trained and certified individuals to support proper shipping of this item.

Nominal Voltage (DCV)	Nominal Capacity (mAh)	Power (Wh)	Weight
50.4	18850	950	17.465 Kg (8.82 kg are lithium batteries)

- The battery pack meets the requirements of the test in the United Nations (UN) Manual of Tests and Criteria, Part III, subsection 38.3. UN38.3 Test Report Summary is available upon request.
- Batteries must be packed in strong rigid outer packaging for transportation. The products are shipping as fully regulated and UN-spec packaging is required.
- The International Air Transport Association (IATA) Dangerous Goods Regulations Packing Instruction 965 IA applies.
- Do not pack or overpack with dangerous goods classified in Class 1 (except 1.4S), Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) and Division 5.1 (oxidizers)

SECTION 15: REGULATORY INFORMATION

U.S. Federal regulations	<ul style="list-style-type: none"> - TSCA Status: All ingredients in these products are listed on the TSCA inventory. - OSHA: These products do not meet criteria as per Part 1910.1200, manufactured article. - SARA EPA Title III: None. Sec. 302/304: None. Sec. 311/312: None. Sec. 313: None. CERCLA RQ: None.
EC Classification for the Substance/Preparation	<p>These products are not classified as hazardous according to Regulation (EC) No. 1272/2008.</p> <p>Keep out of the reach of children.</p>
EU Regulations:	<ul style="list-style-type: none"> - Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I: Not listed. - Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II: Not listed.
	<ul style="list-style-type: none"> - Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I as amended: Not listed. - Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended: Not listed. - Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended: Not listed. - Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended: Not listed. - Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended: Not listed. - Regulation (EC) No. 166/2006, REACH Article 59(10) Candidate List as currently published by ECHA: Not listed.
EU Authorizations:	<p>Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: Not listed</p>

EU Restrictions on use:	<ul style="list-style-type: none"> - Regulation (EC) No. 1907/2006, REACH Annex XVII - Directive 2004/37/EC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding: Not listed
Other EU Regulations	<ul style="list-style-type: none"> - Directive 96/82/EC (Seveso II) on the control of major accident hazards involving dangerous substances: Not listed. - Directive 94/33/EC on the protection of young people at work: Not listed. This Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Chinese Regulations:	<ul style="list-style-type: none"> - General Rule for Classification and Hazard Communication of Chemicals (GB 13690-2009): Specifies the classification, labeling and hazard communication of chemicals in compliance with the GHS standard for chemical production sites and labeling of consumer goods. - General Rule for Preparation of Precautionary Labels for Chemicals (GB 15258-2009): Specifies the relevant application methods of precautionary labels for chemicals. - Safety Data Sheet for Chemical Products Content and Order of Sections (GB/T 16483-2008)

SECTION 16: OTHER INFORMATION

This file is only effective to the batteries SRTL50RMBP1U-LI (used for UPS SMTL3000RM2UC, SMTL2200RM2UC), provided by commissioner Schneider Electric IT Corporation, which is manufactured by Schneider Electric IT USA, Schneider Electric IT Corp. The commissioner provides the composition information of batteries and promises its integrity and accuracy. Users should read this file carefully and use the batteries in correct method. Schneider Electric doesn't assume responsibility for any damage or loss because of misuse of batteries.