RECHARGEABLE LITHIUM ION BATTERY PACK
(XBP48RM1U-LI and XBP48RM1U2-LI)
SAFETY DATA SHEET

Version: 1.4
Review date: March 15th 2019

SECTION 1: IDENTIFICATION

Product identifier:

Product name:	RECHARGEABLE LI-ION BATTERY PACK
Other names:	LI-ION BATTERY/LI-ION ACCUMULATOR PACK, 585 – 625 Wh capacity battery pack
Model Numbers:	XBP48RM1U-LI and XBP48RM1U2-LI
Country:	EU
Product type:	Solid
Picture	

Identified uses

External lithium-Ion battery pack for use with APC by Schneider Electric Uninterruptible Power Supplies, specifically the SRTL1000RMXLI, SRTL1500RMXLI, SRTL1000RMXLI-NC, SRTL1500RMXLI-NC and other designated compatible Uninterruptible Power Supplies.

Manufacturer

Supplier/Manufacturer:	Schneider Electric IT USA (formerly APC by Schneider Electric, APC Sales and Service Corp.)
Address:	132 Fairgrounds Road West Kingston, RI 02892, USA /
Telephone:	+1 800-788-2208 or +1 401-789-5735
E-mail:	http: //nam-en.apc.com/app/ask
Website:	www.APC.com
Telecopy:	Not available.

Emergency telephone number (with hours of operation)

For all Service, Technical Support and Emergency Inquires.
Monday – Friday 8am – 8pm EST.
+1 800-800-4272 **or +1 401-789-5735**

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Product definition: Mixture

Classification according to regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

2.2 GHS label elements:

Signal word: No signal word.

Hazard statements: No known significant effects or critical hazards.

Precautionary statements

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

Prevention:	Not applicable
Response	Not applicable
Storage	Not applicable
Disposal	Not applicable
Supplemental label elements	Not applicable
Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable
Special Packaging	Not applicable
Containers to be fitted with child-resistant fastenings	Not applicable
Tactile warning of danger	Not applicable

See section 14 for more detailed information on packaging and labeling requirements associated with transportation.

2.3 Other Hazards

Other Hazards:	None known
Other hazards which do not result in classification	None known

The product is a battery pack that contains lithium ion battery cells 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 cells within the battery pack. 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

Substance/Mixture: Mixture.
Other means of identification: Not available.

CAS number/other identifiers

Part	Product/ingredient name	Identifiers	%	Classification OSHA HCS 2015
Cathode (positive electrode)	Lithium Metal Composite (Li(Ni,Mn,Co)O2)	Mixture	20-50	Eye, Skin, Respiratory Irritant
Anode (negative electrode)	Carbon, as Graphite	CAS: 7440-44-0	10-30	Eye, Skin, Respiratory Irritant
Electrolyte (proprietary)	LiPF6 salt + EC solvent	Mixture	12-17	Mixture: Flammable; Reactive; Sensitizer; Eye, Skin & Respiratory Irritant
	Polyvinylidene Fluoride (PVDF)	CAS: 24937-79-9	<5	Hot a hazardous substance or mixture.
	Aluminum Metal	CAS: 7429-90-5	2-10	Hot a hazardous substance or mixture.
	Copper Metal	CAS: 7440-50-8	2-10	Hot a hazardous substance or mixture.
Housing/Electronics	Steel Alloy/Plastic and Metal Parts	Mixture		Hot a hazardous substance or mixture.

Further Information

For information purposes: Because of the cell structure the dangerous ingredients will not be available if used properly.

Hazardous Material Content per Directive 2006/66/EC on batteries and accumulators
Mercury content: Hg < 0.1 mg/kg
Cadmium content: Cd < 1 mg/kg
Lead content: Pb < 10 mg/kg

SECTION 4: FIRST AID MEASURES

General information

The information in this section contains generic advice and guidance. The list of Identified uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s). The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery casing. Undamaged, closed cells do not represent a danger to the health.

Description of necessary first aid measures

Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical treatment by eye specialist.
Inhalation	Ensure of fresh air. Consult a physician.
Skin contact	In case of contact with skin wash off immediately with plenty of water. Consult a physician.
Ingestion	Drink plenty of water. Call a physician immediately.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	none
Specific treatments	No specific treatment
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training

See toxicological information (Section 11)

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

Suitable extinguishing media	Cold water and dry powder in large amount are applicable. Use metal fire extinction powder or dry sand if only few cells are involved.
Unsuitable extinguishing media	None known.

Specific hazards arising from the chemical	May form hydrofluoric acid if electrolyte comes into contact with water.
Hazards thermal decomposition products	In case of fire, the formation of the following flue gases cannot be excluded: Hydrogen fluoride (HF), Carbon monoxide and carbon dioxide.
Special protective actions for fire-fighters	If possible, remove cell(s) from firefighting area. If heated above 125°C, cell(s) can explode/vent. Cell is not flammable but internal organic material will burn if the cell is incinerated.
Special protective equipment for fire-fighters	Wear self-contained breathing apparatus and protective suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

For non-emergency personnel	Use personal protective clothing. Avoid contact with skin, eyes and clothing. Avoid breathing fume and gas.
For emergency responders	Take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".
Environmental precautions	Do not discharge into the drains/surface waters/groundwater.

Methods and materials for containment and cleaning up

Pick up and send for disposal. Note that the battery pack may contain a charge a
Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product.

Protective measures	Put on appropriate personal protective equipment (see Section 8).
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.
Conditions for safe storage, including any incompatibilities	Storage at room temperature at approx. 20°C, 60% of the nominal capacity (OCV approx. 3.6 - 3.9 V). Keep in closed original container.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

Occupational exposure limits

No exposure limit value known

Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls	No specific precautions necessary.
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.
Eye/face protection	No specific precautions necessary.

Hand protection	No specific precautions necessary.
Body protection	No specific precautions necessary.
Other skin protection	No specific precautions necessary.
Respiratory protection	No specific precautions necessary.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Color	Various.
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	Not applicable.
Viscosity	Not applicable.

9.2 Other information

No additional information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	The product is stable.

10.3 Possibility of hazardous reactions	Hazardous reactions will not occur.
10.4 Conditions to avoid	Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.
10.5 Incompatible materials	No materials to be especially mentioned.
10.6 Hazardous decomposition products	In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release.
10.7 Additional information	No decomposition if stored and applied as directed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	There is no data available.

Acute toxicity estimates

ROUTE: ORAL	ATE value: 45454.5 mg/kg

Irritation/Corrosion	There is no data available.
Sensitization	There is no data available.
Mutagenicity	There is no data available.
Carcinogenicity	There is no data available.
Reproductive toxicity	There is no data available.
Teratogenicity	There is no data available.
Specific target organ toxicity (single exposure)	There is no data available.
Specific target organ toxicity (repeated exposure)	There is no data available.
Aspiration hazard	There is no data available.

Information on the likely routes of exposure: Dermal contact, Eye contact, Inhalation, Ingestion.

Potential acute health effects

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.

Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	No known significant effects or critical hazards.
Potential delayed effects	No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	No known significant effects or critical hazards.
Potential delayed effects	No known significant effects or critical hazards.

Potential chronic health effects

General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates: There is no data available.

Other information

Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	There is no data available.
12.2 Persistence and degradability	There is no data available.
12.3 Bioaccumulative potential	There is no data available.

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

PBT	Not applicable
vPvB	Not applicable.

12.6 Other adverse effects

No known significant effects or critical hazards.

Further information

Ecological injuries are not known or expected under normal use. Do not flush into surface water or sanitary sewer system.

SECTION 13: DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. Consult local recycling or disposal service providers for further information.

13.1 Advice on disposal

Product

Methods of disposal	The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.
Hazardous waste	This product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

Packaging

Methods of disposal	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

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SECTION 14: TRANSPORT INFORMATION

Lithium-ion battery packs are regulated as Class 9 Miscellaneous Dangerous Goods pursuant to the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air, International Air Transport Association (IATA) Dangerous Goods Regulations, the International Maritime Dangerous Goods (IMDG) Code, European Agreements concerning the International Carriage of Dangerous Goods by Rail (RID) and Road (ADR), and applicable national regulations. These regulations contain very specific packaging, labeling, marking, and documentation requirements. The regulations also require that individuals involved in the preparation of dangerous goods for transport be trained and certified on proper package preparation, labeling, marking and preparing shipping documents. The following provides information to these trained and certified individuals to support their proper shipping of this battery pack.

- The battery pack meets the requirements of the test in the United Nations (UN) Manual of Tests and Criteria, Part III, sub-section 38.3. UN38.3 Report on the battery pack is available upon request.

- Original packaging is strong rigid outer packaging appropriate to its capacity and intended use. The packaging is UN specification. As a lithium ion battery pack, the unit is subject to State of Charge Restrictions (SOC) and is provided by the factory at 30% SOC.
- The battery pack meets the requirements of Packing Instructions 965, section IA of the IATA regulation.
- The battery pack = 585 Wh – 625 Wh (nominal 613.2 Wh) capacity battery pack. The battery pack weighs 12 kg.
- The battery pack must not be packed in the same outer packaging, or placed in an 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).

	ROAD	TDG	IMDG	IATA
14.1 UN number	UN3480	UN3480	UN3480	UN3480
14.2 UN proper shipping name	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES
14.3 Transport hazard class(es)	9 	9 	9 	9  
14.4 Environmental hazards	None	None	None	None
Additional information	Declaration of Dangerous Goods (DGD) is required. Provide emergency response information by including this Safety Data Sheet.	Declaration of Dangerous Goods (DGD) is required.	Declaration of Dangerous Goods (DGD) is required.	Declaration of Dangerous Goods (DGD) is required. State of Charge (SoC) of the battery or cell must not exceed 30%. Maximum 35 kg (battery weight) net quantity per package. 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

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Special precautions for user	Not available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV – List of substances subject to authorization

Annex XIV	None of the components are listed.
Substances of very high concern	None of the components are listed.

Annex XVII – Restrictions on the manufacture placing on the market and use of certain dangerous substances, mixtures and articles

Annex XVII	Not applicable.

Other EU regulations

Europe inventory	At least one component is not listed in EINECS but all such components are listed in ELINCS.
Seveso Directive	is product is not controlled under the Seveso Directive

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: OTHER INFORMATION

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Abbreviations and acronyms:

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Not classified.	

Full text of abbreviated H statements: Not applicable.
Full text of classifications [CLP/GHS]: Not applicable.

NOTE REGARDING BATTERY PACK RATING: This product can be built using different lithium ion battery cells that result in different battery pack ratings (as measured in watt-hours (WH)). This data sheet is intended to address all versions of the product

Notice to reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.