

SECTION 1: IDENTIFICATION

1.1 Product identifier

Product name:	APC Charge Mobile Power Supply for Surface Hub 2
Other names:	APC Charge Mobile Battery, Microsoft Surface Hub 2 Battery, Lithium ion battery pack - 14S4P Configuration, 50.4 V, 8 AHrs, 403.2 WHrs.
Model Numbers:	CSH2
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	
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1.2 Relevant identified uses of the substances or mixture and uses advised against

Relevant identified use(s): Electric Storage Battery

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 - Fairgrounds Road West Kingston, RI 02892, US
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.
800-255-3924 USA and 1-813-248-0585 International

SECTION 2: HAZARDS IDENTIFICATION

OSHA Status/HSC

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this 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 CLP No 1272/2008:

Skin Corrosion Category 1

Carcinogenicity Category 2

2.2 Label elements

Signal Word: **Warning**



Hazard Statements

H317	May cause an allergic skin reaction
H351	Wear Protective Gloves

Precautionary Statements

P280	May cause an allergic skin reaction
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2.3 Other hazards

HMIS Classification

Health hazard : 2
Chronic Health Hazard : *
Flammability : 0
Physical hazards : 0

NFPA Rating

Health hazard : 2
Fire : 0
Reactivity Hazard : 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion May be harmful if swallowed.

2.4 Other information

This battery pack is a sealed, non-spillable design. Under normal use and handling, there is no contact with the internal components of the battery or the chemical hazards within. Under normal use and handling, the pack does not emit regulated or hazardous substances. Misuse of the product, such as overcharging, may result in a discharge of battery internal substances. Classification provided are for the battery internal materials and are only applicable in the event that the internal materials of the battery pack are discharged.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

The material does not meet the criteria of a substance in accordance with regulation (EC) No 1272/2008

Chemical Name	CAS Number	Composition (%)	Classification
Lithium Nickel Cobalt manganese Oxide (LiNiMnCoO ₂) (NMC)	182442-95-1	1.5%	Skin Corrosion Category 1 Carcinogenicity Category 2
Graphite (Carbon)	7782-42-5	>0.5%	Not a Hazardous Substance or Mixture
Polyvinylidene Fluoride (C ₂ H ₂ F ₂)	24937-79-9	>0.5%	Not a Hazardous Substance or Mixture

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 casing.

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.
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 100°C (212°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	Acid mists and vapors, toxic fumes from burning plastic.

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.

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 Precautions for safe handling

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

United States Occupational exposure limits

None

Canada

None

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

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.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Hazardous reactions will not occur.
Conditions to avoid	Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.
Incompatible materials	No materials to be especially mentioned. See Transportation Section for shipping prohibitions.
Hazardous decomposition products	In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release.
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	Category 2 Carcinogen
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.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	There is no data available.
Persistence and degradability	There is no data available.
Bioaccumulative 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

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

SECTION 13: DISPOSAL CONSIDERATIONS

Advice on disposal

For recycling consult manufacturer.






Contaminated packaging

Disposal in accordance with local regulations.

SECTION 14: TRANSPORT INFORMATION

Lithium-ion battery packs are regulated as Class 9 Miscellaneous Dangerous Goods (also known as “hazardous materials” in the United States) 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 such as the USA’s hazardous materials regulations (see 49 CFR 173.185). 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 = 403.2 WHrcapacity battery pack. The battery pack weighs 11.0 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).

	U.S. DOT	TDG	IMDG	IATA
UN number	UN3480	UN3480	UN3480	UN3480
UN proper shipping name	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES
Transport hazard class(es)	 9	 9	 9	 9 
Environmental hazards	None	None	None"	None
Additional information	<p>HAZMAT Bill of Lading (BOL) required via ground or rail; Dangerous Goods Declaration via air or sea.</p> <p>Provide emergency response information by including this Safety Data Sheet.</p> <p>If shipped via ground in the USA, an acceptable alternative is to write "ERG 147" on the Bill of Lading.</p>	Declaration of Dangerous Goods (DGD) is required.	Declaration of Dangerous Goods (DGD) is required.	<p>Declaration of Dangerous Goods (DGD) is required.</p> <p>State of Charge (SoC) of the battery or cell must not exceed 30%.</p> <p>Maximum 35 kg (battery weight) net quantity per package.</p> <p>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</p>

AERG : 147

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

U.S. Federal regulations	TSCA 8(a) CDR Exempt/Partial exemption: All chemical components are listed or exempt from listing
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	United States inventory (TSCA 8b): All components are listed or exempted.
Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)	Not available.
Clean Air Act Section 602 Class I Substances	Not available.
Clean Air Act Section 602 Class II Substances	Not available.
DEA List I Chemicals (Precursor Chemicals)	Not available.
DEA List II Chemicals (Precursor Chemicals)	Not available.

SARA 302/304

Composition/information on ingredients

Not available.

SARA 304 RQ: Not available.

SARA 311/312

Classification: Not applicable.

SARA 311/312

Not applicable

SARA 313

This product contains no toxic chemicals subject to the supplier notification requirements of Section 313.

California Prop. 65

No known California Proposition 65 material that require WARNING language.

Canada - Canadian lists

Canadian NPRI	Not known
CEPA Toxic substances	Not known
Canada inventory	Not known.

SECTION 16: OTHER INFORMATION

Review date: November 11, 2019

Version: 1.1

APC Charge Mobile Power Supply for Surface Hub 2 (NA)

Version: 1.1

Date: November 11, 2019

Further Information USA

Data of sections 4 to 8, as well as 10 to 12, do not necessarily refer to the use and the regular handling of the product (in this sense consult package leaflet and expert information), but to release of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product (s) and is based on the present level of our knowledge. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.

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.