

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,
Model Numbers:	CSH2, CSH2-I, CSH2-JP
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.



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 - 70 Mechanic Street, Foxboro, MA 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

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.

2.1 Classification of the substance or mixture

Classification according to EU 1907/2006, OSHA and UN GHS

Acute toxicity, oral (4)

Skin corrosion/irritation (2)

Serious eye damage/eye irritation (2A)

Specific target organ toxicity, single exposure: Respiratory tract irritation (3)

2.2 Label elements

Hazard Pictogram



Signal Word: Warning

Hazard Statements:

H302 Harmful if swallowed

H315 Causes skin irritation.

1319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary Statements

Prevention	<p>P264 Wash skin and clothing thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves. protective clothing, eye protection, face protection.</p> <p>P261 Avoid breathing dust, fume, gas, mist. vapors, spray.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p>
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<p>Response (If cell/battery leaks)</p>	<p>P301 + P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302 + P352 IF ON SKIN: Wash with plenty water.</p> <p>P321 Specific treatment (See additional emergency instructions).</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice.</p> <p>P362 + P364 Take off contaminated clothing and wash it before reuse.</p> <p>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 + P313 If eye irritation persists: Get medical advice.</p> <p>P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P312 Call a POISON CENTER, if you feel unwell</p>
<p>Storage (Store as indicated in Section 7)</p>	<p>P403 + P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P406 Store locked up</p>
<p>Disposal</p>	<p>P501: Dispose of batteries in accordance with applicable hazardous waste regulations.</p>

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

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

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 (%)
Lithium Nickel Cobalt manganese Oxide (LiNiMnCoO ₂) (NMC)	182442-95-1	40
Graphite (Carbon)	7782-42-5	20
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	9
Iron	7439-89-6	14

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 60°C (140°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

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	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.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	There is no data available.
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

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 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	8000	403.2	9.5414 Kg (2.52 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
- Original packaging is strong rigid outer packaging appropriate to its capacity and intended use. The packaging is UN specification.

- The International Air Transport Association (IATA) Dangerous Goods Regulations (62nd Edition 2021, Special Provisions A88, A99, A154, A164, A183, A201, A206, A213, A331, A334 & A802 for UN3480 Lithium Ion Battery & Packing Instruction 965, Section IA is applied.) Lithium-ion batteries transport by air in accordance with PI965 at a state of charge (SOC) not to exceed 30 percent of rated design capacity
- The International Maritime Dangerous Goods (IMDG) Code (Edition 2020, Special Provision 230, 348, 384 Packing Instruction P903 is applied).
- 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	9	9	9	9
Transport hazard Label				
Environmental hazards	None	None	None	None
Additional information	HAZMAT Bill of Lading (BOL) required via ground or rail; Dangerous Goods Declaration via air or sea. Provide emergency response information by including this	Declaration of Dangerous Goods (DGD) is required.	Declaration of Dangerous Goods (DGD) is required	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

	Safety Data Sheet.			packaging/equipment). Statement on the Air waybill:"
				Dangerous Goods as per Attached
	If shipped via ground in the USA, an acceptable alternative is to write" ERG 147" on the Bill of Lading.			DGD" or" Dangerous Goods as per attached Shipper's Declaration" and « Cargo Aircraft Only » or « CAO »

North American Emergency Response Guide (ERG) : 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	<p>TSCA Status: All ingredients in these products are listed on the TSCA inventory</p> <p>OSHA: These products do not meet criteria as per Part 1910.1200, manufactured article</p> <p>SARA EPA Title III: None.</p> <p>Sec. 302/304: None</p> <p>Sec. 311/312: None</p> <p>Sec. 313: None</p> <p>CERCLA RQ: None.</p> <p>Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Not available</p> <p>Clean Air Act Section 602 Class I and Class II Substances: Not available</p> <p>DEA List I and List II Chemicals (Precursor Chemicals): Not available</p> <p>California Prop. 65: No known California Proposition 65 material that require WARNING language</p>
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Canada - Canadian lists	Canadian NPRI: Not known CEPA Toxic substances: Not known Canada inventory: Not known
EC Classification for the Substance/Preparation:	These products are not classified as hazardous according to Regulation (EC) No. 1272/2008. Keep out of the reach of children
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. • 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:	Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended: Not listed
EU Restrictions on use:	<ul style="list-style-type: none"> • Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Aluminum (CAS 7429-90-5) • 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.

<p>Chinese Regulations</p>	<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.
	<ul style="list-style-type: none"> • 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) • Guidance on the compilation of safety data sheet for chemical products. (GB/T 17519-2013)

SECTION 16: OTHER INFORMATION

Origination date: March 17, 2020
 Review Date: January 30, 2024 Version: 1.6

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:

Schneider Electric has prepared this Product Safety Datasheets to provide information on the referenced battery systems. Batteries are defined as articles under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). 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.

