


SECTION 1: IDENTIFICATION

Product identifier:

Product name:	(Galaxy) LI-ION BATTERY 9540A - BATTERY MODULE -- 2036 WH
Other names:	LIBSMG95MODA, LIBSMG95MODB, EM2031AE001A/2A/3A/4A
Model Numbers:	MODEL LIBSMG95MODA, LIBSMG95MODB (note A and B denote wire harness connection variances)
Country:	USA/Canada/Worldwide
Product type:	Solid
Picture:	

Identified uses

Lithium-Ion Battery, Lithium-Ion Battery Pack
Populate rack systems of the Galaxy product lines

Manufacturer

Supplier/Manufacturer:	Schneider Electric IT (formerly APC by Schneider Electric, APC Sales and Service Corp.)
Address:	132 Fairgrounds Road West Kingston, RI 02892, USA / SEIT- CA, c/o 210080, PO Box 11728, SUCC. Centre-Ville, Montreal, QC, H3C 6P7132
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.
800-255-3924 USA and 1-813-248-0585 International

SECTION 2: HAZARDS IDENTIFICATION

OSHA/HCS status:

OSHA Hazard Communication: This material is not considered hazardous by the OSHA Hazard Communication Standard 29CFR 1910.1200.

Carcinogenicity (NTP): Not listed
Carcinogenicity (IARC): Not listed
Carcinogenicity (OSHA): Not listed

Classification of the substance or mixture:

Not classified.

GHS label elements:

Signal word: No signal word.
Hazard statements: No known significant effects or critical hazards.

Precautionary statements

Prevention:	Not applicable
Response	Not applicable
Storage	Not applicable
Disposal	Not applicable

Hazards not otherwise classified (HNOC)

Physical hazards not otherwise classified (PHNOC): None known.

Health hazards not otherwise classified (HHNOC): In case of cell damage, possible release of dangerous substances and a flammable gas mixture

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

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

CAS number/other identifiers

Product/ingredient name	Identifiers	%	Classification OSHA HCS 2015
Dicobalt trioxide	EC: 215-154-6 CAS: 1308-04-9	< 30	Acute Tox. 4, H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1, H317
Manganese dioxide	EC: 215-202-6 CAS: 1313-13-9	< 30	Acute Tox. 4, H302 Acute Tox. 4, H332
Dinickel trioxide	EC: 215-217-8 CAS: 1314-06-3	< 30	Carc. 1A, H350 Aquatic Chronic 4, H413 Skin Sens. 1, H317 STOT RE 1, H372

Carbon	EC: 231-153-3 CAS: 7440-44-0	≥10 - <30	Not Classified
Electrolyte (*)		≥10 - <20	Carc. 2, H351 Skin Corr. 1B, H314 Skin Sens. 1, H317 Flam. Liq. 3, H226
Polyvinylidene fluoride (PVdF)	CAS: 24937-79-9	< 10	Not Classified
Aluminium foil	EC: 231-072-3 CAS: 7429-90-5	>2 - <10	Not Classified
Copper foil	EC: 231-159-6 CAS: 7440-50-8	≥2 - <10	Not Classified
Aluminium and inert materials		≥5 - <10	Not Classified

See Section 16 for full text of H-statements

Further Information

For information purposes:

(*) Main ingredients: Lithium hexafluorophosphate, organic carbonates

Because of the cell structure the dangerous ingredients will not be available if used properly. During charge process a lithium graphite intercalation phase is formed.

Mercury content: Hg < 0.1mg/kg

Cadmium content: Cd < 1mg/kg

Lead content: Pb < 10mg/kg

LI-ION BATTERY 9540A - BATTERY MODULE (LIBSMG95MODA/B)

Version: 1.2

Date: August 3, 2020

Page 3 to 12

SECTION 4: 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.

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

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

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

Take up mechanically and send for disposal.

Note: See Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

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. Advice on protection 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.
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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.
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.
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. UN38.3.5 Test Summary Report on the battery pack is available .
- 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 = 2036 WH capacity battery pack. The battery pack weighs 17.0 kg. Each battery pack contains 15.04 kg of lithium ion batteries.
- 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).

	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	No.	No.	No.	No.
Additional information	"UN3480, Lithium ion batteries, class 9" and provide emergency response information by including the Safety Data Sheet or writing "ERG 147" on the Bill of Lading.	-	"UN3480, Lithium ion batteries, class 9 // P903" on IMDG plus emergency response information including this Safety Data Sheet	"UN3480, Lithium ion batteries, class 9 // ___ kg x ___ fiberboard boxes// PI965" and Air waybill: "Dangerous Goods as per attached Shipper's DGD".

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	TSCA 8(a) CDR Exempt/Partial exemption: All chemical component are listed or exempt from listing 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.

LI-ION BATTERY MODULE (LIBSMG95MODA/B)

Version: 1.2

Date: August 3, 2020

Page 10 to 12

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.
Composition/information on ingredients. No products were found.

SARA 311/312

Not applicable

SARA 313

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

State regulations

Massachusetts	Not known
New York	Not known
New Jersey	Not known
Pennsylvania	Not known

California Prop. 65

No Warning Required

Canada - Canadian lists

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

SECTION 16: OTHER INFORMATION

Initial Release date: April 20, 2020

Version: 1.2

Review Date: August 3, 2020

Classification	Justification
Not classified.	

Full text of abbreviated H statements:

H228	Flammable solid.
H261	In contact with water releases flammable gases.

Full text of classifications [CLP/GHS]:

Flam. Sol. 1, H228 Water-react. 2, H261	FLAMMABLE SOLIDS - Category 1 SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2
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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.