MKT-00544, Rev1.0

Safety Data Sheet

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023



Enphase IQ Battery

Safety Datasheet

Date of Issuance: 13-April-2016

Revision Date: 03-March-2023

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 1: Product Name and Identification

- 1.1 Product Identifier:
 - 1.1.1 Product Name: Enphase IQ Battery (formerly known as Encharge)
 - 1.1.2 Product Number:

| IQ Battery 3 (North America) | ENCHARGE-3-1P-NA |
|--------------------------------|---------------------|
| IQ Battery 10 (North America) | ENCHARGE-10-1P-NA |
| IQ Battery 3T (North America) | ENCHARGE-3T-1P-NA |
| IQ Battery 10T (North America) | ENCHARGE-10T-1P-NA |
| IQ Battery 3T (Europe) | ENCHARGE-3T-1P-INT |
| IQ Battery 10T (Europe) | ENCHARGE-10T-1P-INT |

- 1.1.3 Other Means of Identification
 - Lithium Iron Phosphate Battery
 - UN3480 Lithium-Ion Batteries
- 1.1.4 Product Description: The Enphase IQ Battery consists of a 21-cell lithium iron phosphate battery, battery management unit (BMU), microinverter, miscellaneous electronics and protective case.
- 1.2 Product Use
 - 1.2.1 Identified Uses: The product is to be used as an alternating current(AC)-coupled energy system primarily used with photovoltaic systems.
 - 1.2.2 Use Restrictions: Operate the battery under the following conditions:
 - Temperature Range: Do not expose battery to temperatures outside the range of -40 to 80°C. To minimize any adverse effects on battery performance it is recommended that the cells be kept at room temperature (25°C +/- 5°C).
 - Do not store close to heat sources, such as furnaces or open flames.
 - Store in a dry location.
 - Protect battery from physical damage. Do not open, dissemble, crush, or burn battery.
- 1.3 Details of the Supplier of the Safety Data SheetEnphase Energy1420 N. McDowell Blvd. Petaluma, CA 94954 (707) 763-4784
- 1.4 Emergency Telephone Number:
 - 1.4.1. Inside United States Territories and Canada: (800) 255-3924
 - 1.4.2. Outside United States Territories and Canada: +01 (813) 248-0585

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

NORTH AMERICA

Headquarters 47281 Bayside Pkwy. Fremont, CA 94538 Sales: (833) 963-3820

Petaluma, California 1420 N. McDowell Blvd. Petaluma, CA 94954 Sales: (833) 963-3820

Austin, Texas 1835 Kramer Ln. Building B Suite 125 Austin, TX 78758

Meridian, Idaho 1819 S. Cobalt Point Way Meridian, ID 83642

<u>EUROPE</u>

Netherlands Het Zuiderkruis 65 5215 MV 's -Hertogenbosch The Netherlands +31-73-3035859

France
Hub 2,
2ème étage
905 rue d'Espagne
BP 128 69125 Aéroport Lyon
Saint Exupéry
General: +33(0)474982956

Support: +33(0)0970731076

Fax: +33474983815

Germany Christaweg 42 79114 Freiburg im Breisgau, Germany +49 761 887893-20

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

APAC

China

Room 32D, No.18 North Caoxi Road Xuhui District, Shanghai, China 200030 +86 21-64686815

Melbourne, Australia 88 Market Street, South Melbourne VIC 3205 General: 03 8669 1679 Tech Support: 1800 006 374

New Zealand 1 Treffers Road Wigram, Christchurch Technical Support: 09 887 0421

India

Enphase Solar Energy Pvt. Ltd. IndiQube Golf View Homes, Ward No.73 Airport, NAL Wind Tunnel Main Road, Murugeshpalaya, Bangalore-560 017 +91-80-6117-2500

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 2: Hazard Identification

2.1. Hazard Classification and Hazard Statement

The battery is sealed inside a protective case and is not expected to expose user to hazardous ingredients under normal use conditions. Risk of exposure occurs only if IQ Battery is mechanically, thermally, or electrically abused to the point where both the protective case and battery are compromised. If this occurs, exposure to electrolyte solutions contained within the cell may occur by eye contact, skin contact and ingestion. The following hazard classifications only apply to the electrolyte.

- H226 Flammable Liquid (Category 3)
- H301 Oral Toxicity (Category 3)
- H302 Oral Toxicity (Category 4)
- H312 Dermal Toxicity (Category 4)
- H314 Severe Skin Burns (Category 1)
- H315 Skin Irritation (Category 2)
- H318 Severe Eye Damage burns (Category 1)
- H319 Serious Eye Irritation (Category 2)
- H335 Specific organ toxicity; single exposure; respiratory tract irritation (Category 3)
- H350 Carcinogenicity (Category 1A/ 1B)
- H372 Specific organ toxicity; repeated exposure (bones, teeth) (Category 1)
- H373 Specific organ toxicity; repeated exposures (kidneys) (Category 2)

2.2 GHS Label Elements

2.2.1. Pictogram (Electrolyte)



2.2.2. Signal Word: DANGER

Date of Issuance: 13-April-2016
Date of Revision: 03-March-2023

2.3 GHS Hazard Statement (Electrolyte)

| Hazard Class | Hazard Category | Hazard Code | Hazard Statement |
|---|--------------------|----------------|---|
| Flammable Liquid | 3 | H226 | Flammable liquid and vapor |
| Oral Toxicity | 3 | H301 | Causes Acute oral toxicity |
| Oral Toxicity | 4 | H302 | Causes Acute oral toxicity |
| Dermal Toxicity | 4 | H312 | Causes Acute dermal toxicity |
| Skin Corrosion | 1 | H314 | Causes severe skin burns |
| Skin Irritation | 2 | H315 | Causes skin irritation |
| Eye Damage | 1 | H318 | Causes severe damage burns |
| Eye Irritation | 2 | H319 | Causes serious eye irritation |
| Carcinogenicity | 1A/1B | H350 | Causes cancer |
| Specific organ toxicity; single exposure; respiratory tract irritation. | 3 | H335 | May cause respiratory irritation |
| Specific target organ toxicity; - repeated exposure | 1 | H372 | Causes damages to organs (bones, teeth) |
| Specific target organ toxicity; - repeated exposure | 2 | H373 | Causes damages to organs (Kidneys) |

2.4. Precautionary Statement

- P101 If medical advice is needed: Have product container or label in hand.
- P102 Keep out of reach of children.
- P103 Read label before use.
- P210 Keep away for heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P264 Wash hands thoroughly after using.
- P280 Wear protective gloves/eye and face protection.
- P302 + P303 + P352 + P353 + P361 + P362 +P364 If on skin (or hair):
 Take off all contaminated clothing and wash before reuse immediately.
 Rinse skin with water.
- P337 + P332 + P313 If skin irritation occurs or eye irritation persists: get medical attention or advice.
- P370 + P378 In case of fire: Use ABC dry chemical to extinguish.

2.5 Hazard Which are Not Covered by GHS

No data available.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 3: Composition/Information on Ingredients

3.1. Substances

As a solid manufactured article, exposure to hazardous ingredients is not expected to occur with normal use.

Enphase IQ Battery 3, IQ Battery 10 (North America) Composition Information

| Chemical Name | CAS# | EINECS EC# | Concentration Range in Electrolyte (w/w %) | Mass Range in Cell (g/g %) | | |
|------------------------------|----------------------|---------------|---|-------------------------------|--|--|
| | Electro | olyte | | | | |
| Lithium Hexfluorophosphate | 21324-40-3 | 244-344-7 | 10-20 | 1-5 | | |
| Lithium bis- | 90076-65-6 | 415-300-0 | 1-5 | 0.1-1 | | |
| trifluoromethanesulfonoimide | | | | | | |
| | Electrolyte Solvents | | | | | |
| Ethylene Carbonate | 96-49-1 | 202-510-0 | 80-90 | 10-20 | | |
| Propylene Carbonate | 108-32-7 | 203-572-1 | | | | |
| Diethyl Carbonate | 105-58-8 | 203-311-1 | | | | |
| Dimethyl Carbonate | 616-38-6 | 210-478-4 | | | | |
| Ethyl methyl carbonate | 623-53-0 | No listing | | | | |
| 1,3 Propanesultone | 1120-71-4 | 214-317-9 | | | | |

Enphase IQ Battery 3T, IQ Battery 10T (North America) Composition Information

| Chemical Name | CAS# | Content % |
|-----------------------------|------------|-----------|
| Lithium Iron Phosphate | 156-21-8 | 30 |
| Graphite | 7782-42-5 | 13 |
| Ethylene Carbonate | 96-49-1 | 7 |
| Ethyl Methyl Carbonate | 623-53-0 | 6 |
| Dimethyl Carbonate | 616-38-6 | 7 |
| Aluminum | 7429-90-5 | 5 |
| Copper | 7440-50-8 | 13 |
| Lithium Hexafluorophosphate | 21324-40-3 | 4 |
| Polyphenols ether | 24938-67-8 | 7 |
| Iron | 7439-89-6 | 7 |
| Poly urethane | 51851-81-4 | 0.5 |

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Enphase IQ Battery 3T, IQ Battery 10T (Europe) Composition Information

| Chemical Formula | CAS No. | Concentration Range in Electrolyte (w/w%) | | |
|--|------------|---|--|--|
| Lithium Hexafluorophosphate | 21324-40-3 | 10-20 | | |
| Lithium bis-trifluoromethanesulfonoimide | 90076-65-6 | 1-5 | | |
| Ethylene Carbonate | 1313-99-1 | | | |
| Diethyl Carbonate | 108-32-7 | | | |
| Dimethyl Carbonate | 105-58-8 | 00.00 | | |
| Ethyl methyl carbonate | 616-38-6 | 80-90 | | |
| 1,3 Propanesultone | 623-53-0 | | | |
| Alumminium and inert materials | 1120-71-4 | | | |

Section 4: First-Aid Measures

The Enphase IQ Battery contains organic electrolyte and is sealed in a protective case. Risk of exposure occurs only if the cell is mechanically, thermally, or electrically abused to the point of compromising the enclosure. If the battery is physically damaged and results in electrolyte leakage, the following initial care measures should be taken in the event that a person(s) are exposed to the electrolyte.

4.1 Description of First Aid Measures

4.1.1 General Advice:

- Move victim to fresh air and out of the dangerous area.
- Show this safety data sheet to the medical professional in attendance.
- Quickly transport victim to emergency care in the event of eye contact, skin irritation, ingestion or inhalation.
- 4.1.2 Eye Contact: Immediately flush the eyes with plenty of clean water for at least 15 minutes, without rubbing. If appropriate procedures are nottaken, this may cause an eye irritation. Seek medical attention if eye irritation persists.
- 4.1.3 Skin Contact: Take of all contaminated clothing and wash before reuse immediately. Rinse skin with water. If appropriate procedures are not taken, this may cause skin irritation. Seek medical attention if skin irritation occurs.
- 4.1.4 Inhalation Contact: Move victim to fresh air immediately and removesource of contamination from area. Seek medical attention.
- 4.1.5 Ingestion: Have victim rinse mouth thoroughly with water. Seek medical

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

attention.

- 4.2. Most Important Symptoms and Effects, Acute and Delayed Refer to Section 2 for information on the most important known symptoms.
- 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed
 - See Section 4.1.1
- 4.4 Self-protection of First Responder
 - Use personal protective equipment as described in Section 8.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 5: Fire-Fighting Measures

Lithium-ion batteries contain flammable liquid electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (> 150 °C (302 °F)), when damaged or abused (e.g., mechanical damage or electrical overcharge). Burning cells can ignite other batteries in close proximity.

5.1 Extinguishing Media

- Small ACB dry chemical fire extinguisher or regular foam
- Additional extinguishing media include carbon dioxide, alcohol-resistant foams or water spray.
- The interaction of water or water vapor and exposed lithium hexafluorophosphate may result in the generation of hydrogen and hydrogen fluoride (HF) gas.

5.2 Specific Hazards

- Lithium iron phosphate batteries contain flammable liquid electrolyte that may vent, ignite and generate vapors.
- The interaction of water or water vapor and exposed lithium hexafluorophosphate may result in the generation of hydrogen and hydrogen fluoride (HF) gas.

5.3 Special Protective Actions for Firefighters

- Wear respiratory protection.
- Use personal protective equipment as described in Section 8.

Date of Issuance: 13-April-2016
Date of Revision: 03-March-2023

Section 6: Accidental Release Measures

- 6.1. Personal Precautions, Protective Equipment and Emergency Procedures
 - Evacuate personnel to a safe area and keep unauthorized personnel away.
 - Isolate spill area to a minimum distance of 75 feet (25 meters)
 - Eliminate all ignition sources (no smoking, sparks, flames, hot equipment) in the immediate area around the spill.
 - Do not touch or walk through spilled material.
 - Avoid breathing vapors. Ensure adequate ventilation.
 - Use personal protective equipment as described in Section 8.

6.2. Environmental Precautions

- Absorb spilled material with non-combustible, non-reactive absorbent. Prevent from migration into soil, sewers and natural waterways.
- 6.3. Methods and Materials for Containment and Clean-Up
 - Contaminant and clean-up should only be completed by qualified personnel.
 - Stop leak only if it is safe to do so.
 - Clean any residual electrolyte and liquid using non-combustible, nonreactive absorbent. Ensure that cleanup procedures do not expose spilled material to moisture.
 - Containerize and place all leaking batteries in individual containers that
 are leak-proof, non-conductive, non-combustible and have absorbent
 (e.g., LDPE plastic bag that is sealed shut and contains sufficient
 absorbent for the contained electrolyte). Ensure sufficient absorbent is
 used to absorb the full amount of liquid from the battery.
 - Place used spill response materials in leak-proof, non-conductive, non-combustible containers containing absorbent and separate from batteries that have absorbent (e.g., LDPE plastic bag that is sealed shut and contains sufficient absorbent for the contained electrolyte).
 - Avoid the release of collected materials. Do not bring the collected materials near open flame.

6.4. Reference for Other Sections

For disposal see Section 13.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 7: Handling and Storage

7.1. Precautions for Safe Handling

- Avoid mechanical damage of the Enphase IQ Battery. Do not open or disassemble the Enphase IQ Battery.
- Avoid short circuiting the cell. Remove jewelry items such as rings, wristwatches, pendants, etc. that could come in contact with the battery terminals if the terminals are exposed.
- Never use a battery that has suffered abuse. Refer to data sheet for safe operating instructions.

7.2 Conditions for Safe Storage

- Store Enphase IQ Batteries under the following conditions when not in use:
- Store indoors and on pallets or similar devices to enable any leaks to be visibly observed upon inspection and to ensure the items do not come into contact with water or salt breeze.
- Store in a dry location and away from heat sources such as furnaces, open flames, etc. Do not expose cell to temperatures outside the range of -40°C to 80°C.
- Do not open, dissemble, crush or burn cell.
- To minimize any adverse effects on battery performance it is recommended that the cells be kept at room temperature (25°C +/- 5°C). Elevated temperatures can result in shortened cell life.
- Store in an upright position and in areas that are not likely to be damaged or disturbed by personnel, equipment or vehicles.
- Do not store unboxed items in areas with a source of spark generation within 30 cm, in direct sunlight, in direct exposure to exhaust gas such as those from automobiles or in places with continuous or intermittent vibration.

7.3 Specific Uses

 The Enphase IQ Battery is used as a fully integrated component of the Enphase Energy Management System.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 8: Exposure Controls/Personal Protection

8.1 Control Parameters

- 8.1.1. Airborne exposure to hazardous substances in the electrolyte is not expected when the cells or batteries are used for their intended purposes.
- 8.1.2. United States Occupational Exposure Limits:
 - Lithium Hexafluorophosphate (as fluoride)
 - USA, OSHA PEL: 2.5 mg/m³ (TWA)
 - USA, ACGIH TVL: 2.5 mg/m³ (TWA)
 - USA, ACGIH BEI: 2 mg/L (urine prior to shift), 3 mg/L (urine –end of shift)
 - No published exposure limits for the remaining electrolyte components.

8.1.3. European Union Occupational Exposure Limits

| Limit Value – Eight Hour | | Limit Value – Short Term | | | |
|--------------------------|------|--------------------------|------------------------|-------------------|--|
| Country | ppm | mg/m³ | ppm | mg/m³ | |
| Lithium Hexafluoror | | | hosphate (as fluoride) | | |
| Austria | None | 2.5 | None | 12.5 (30 minutes) | |
| Belgium | None | 2.5 | None | None | |
| Denmark | None | 2.5 | None | 5 | |
| European Union | None | None | None | None | |
| France | None | 2.5 | None | None | |
| Germany | None | 1.0 | None | 4 (15 minutes) | |
| Hungary | None | 2.5 | None | 10 | |
| Italy | None | None | None | None | |
| Poland | None | 2.0 | None | None | |
| Spain | None | 2.5 | None | None | |
| Sweden | None | 1.0 | None | None | |
| Switzerland | None | 1.0 | None | 4 (15 minutes) | |
| The Netherlands | None | None | None | 2 (15 minutes) | |

No published Occupational Exposure Limits for the remaining electrolyte components

8.2 Exposure Controls

8.2.1. Routine Handling:

- The IQ Battery has a lithium ion battery contains organic electrolyte that is sealed in a protective case. There is no risk of exposure during routine handling. Risk of exposure occurs only if the Enphase IQ Battery is mechanically, thermally, or electrically abused to the point of compromising the enclosure.
- Do not eat, drink or smoke in work areas. Avoid storing food, drink or tobacco near the product. Practice and maintain good housekeeping.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

 Remove jewelry items such as rings, wristwatches, pendants, etc., that could come in contact with the battery terminals if the terminals are exposed to avoid short circuiting.

8.2.2. Personal Protective Equipment:

- The following personal protective equipment should be worn if the Enphase IQ Battery is mechanically, thermally, or electrically abused to the point where the protective case is damaged and there is a risk of exposure to the electrolyte.
- Skin/body protection: Wear closed toe shoes, chemical resistant overalls, protective over boots.
- Gloves: 15 mm nitrile rubber gloves. Immersion protection provided when nitrile gloves worn over laminated film barrier gloves (Ansell Barrier 2-100 or equivalent).
- Eye/Face protection: Take steps to prevent exposure to eyes and face including chemical splash goggles and face shield.
- Respiratory protection: Wear a full face respirator with an Organic Vapor/Acid Gas/Particulate filter (3M Model No. 60923 or equivalent).

8.2.3. Engineering Controls

- See Section 6 for accidental release response measures.
- See Section 7 handling and storage measures.
- Ventilate the immediate area around a leaking the cell or battery.

Safety Data Sheet Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 9: Physical and Chemical Properties

| Physical and Chemical Property | ACB | Electrolyte |
|--|------------------------|-------------------|
| Physical State | Solid | No data available |
| Color | No data available | No data available |
| Odor | Odorless | No data available |
| Melting point/freezing point | No data available | No data available |
| Boiling point | No data available | No data available |
| Flammability | No data available | No data available |
| Lower/upper explosion limit | Not applicable (solid) | No data available |
| Flash point | Not applicable (solid) | No data available |
| Evaporation Rate | Not applicable (solid) | No data available |
| Auto-ignition temperature | Not applicable (solid) | No data available |
| Decomposition Temperature | 90°C | No data available |
| рН | Not applicable | No data available |
| Kinematic Viscosity | Not applicable (solid) | No data available |
| Solubility | Insoluble | No data available |
| Partition Coefficient n- Octanol/water | Not applicable | No data available |
| Vapor Pressure | No data available | No data available |
| Density | Not available | No data available |
| Relative Vapor Density | Not applicable (solid) | No data available |
| Particle characteristics | No data available | No data available |
| Explosive Properties | No data available | No data available |
| Oxidizing Properties | No data available | No data available |

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 10: Stability and Reactivity

- 10.1. Reactivity
 - No data available.
- 10.2. Chemical Stability
 - The Enphase IQ Batteries are stable under normal use and in normal storage conditions.
- 10.3. Possibility of Hazardous Reactions
 - Fire may occur if the battery has physical damaged or exposed to hith temperature conditions.
 - Do not expose cell to temperatures outside the range of -40°C to 80°C.
 - Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse or electrical shorts.
- 10.4. Conditions to Avoid
 - See Section 7.
- 10.5. Incompatible Materials
 - No data available.
- 10.6. Hazardous decomposition products
 - Hydrofluoric acid and carbon monoxide may be released in the event that a cell/battery is physically damaged to the point where the case is compromised, and electrolyte is released.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 11: Toxicological Information

11.1. Likely Routes of Exposure

The Enphase IQ Battery has a lithium ion cell that contains organic electrolyte that is sealed in a protective case. Risk of exposure occurs only if the cell is mechanically, thermally, or electrically abused to the point of compromising the protective case. The following toxicological information only applies in the event that electrolyte leaks from the battery due to physical damage and an individual comes in contact with the electrolyte. No toxicological data is available regarding the electrolyte andthe following information is provided for the electrolyte components.

11.2. Acute Toxicity

- Electrolyte:
 - Oral: Lithium hexafluorophosphate is classified as acute toxicoral (Category 3 (H301)). Ethelene carbonate and 1, 3propane sultone are classified as acute toxic-oral (Category 4 (H302)). No oral toxicity data available for the electrolyte. The electrolyte is presumed to be acutely toxic – oral in accordance with GHS mixture rules.
 - Inhalation: No Data available
 - Dermal/Eye: 1,3-propanesultone is classified as acute toxic– dermal (Category 4 (H312)). The electrolyte is not acutely toxic – dermal in accordance with GHS mixture rules.

11.3 Skin Corrosion/Irritation

Electrolyte: Individual components of the electrolyte cause skin corrosion/irritation and serious eye damage/irritation. Lithium hexafluorophosphate is classified as causing severe skin burns (Category 1 (H314)). Diethyl carbonate, ethyl methyl carbonate and propylene carbonate are classified as causing skin irritation (Category 2 (H315)). No data is available for the electrolyte and it is presumed to cause skin corrosion/irritation per GHS mixture rules.

11.4 Serious Eye Damage/Irritation

 Electrolyte: Individual components of the electrolyte cause serious eye damage/irritation. Lithium hexafluorophosphate is classified as causing severe damage burns (Category 1 (H318)). Ethylene carbonate, dimethyl carbonate, ethyl methyl carbonate propylene carbonate and 1,3-propanesultone are classified as causing serious

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

eye irritation (Category 2 (H319)). No data is available for the electrolyte and it is presumed to cause serious eye damage/irritation per GHS mixture rules.

11.5. Respiratory or Skin Sensitization

• Electrolyte: No available data. No ingredients of the electrolyte are identified as causing respiratory or skin sensitization.

11.6. Germ cell Mutagenicity

 Electrolyte: No available data. No ingredients of the electrolyte are identified as causing germ cell mutagenicity.

11.7. Carcinogenicity

• Electrolyte: 1,3-Propanesultone is identified as may cause (Category 1A/!B – H350). No data is available for the electrolyte.

11.8. Reproductive Toxicity

• Electrolyte: No data available. No ingredients of the electrolyte are identified as having reproductive toxicity.

11.9. Specific Target Organ Toxicity – Single Exposure

 Electrolyte: Diethyl carbonate, ethyl methyl carbonate and propylene carbonate are identified as causing lung irritation with a single exposure (Category 3 – H335). No data is available for the electrolyte and it is presumed to cause specific target organ toxicity damage (respiratory) with repeated exposure per GHS mixture rules.

11.10. Specific Target Organ Toxicity – Repeated Exposure

 Electrolyte: Individual components of the electrolyte cause specific target organ toxicity damage with repeated exposure. Lithium hexafluorophosphate is identified as causing damage to bones and teeth (Category 1 (H372)). Ethylene carbonate is classified as causing damage to the kidneys (Category 2 (H373)). No data is available for the electrolyte and it is presumed to cause specific target organ toxicity

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

damage with repeated exposure per GHS mixture rules.

- 11.11. Aspiration Hazards
 - Electrolyte: No data available.
- 11.12. Symptoms Related to Physical, Chemical and Toxicological Characteristics
 - Available information pertaining to the physical, chemical and toxicological characteristics of the electrolyte is presented for each hazard class (Section 11.2 – 11.11).
- 11.13. Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure
 - Available information pertaining to the physical, chemical and toxicological characteristics of the electrolyte is presented for each hazard class (Section 11.2 11.11).

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 12: Ecological Information

- 12.1 Toxicity
 - No data available.
- 12.2 Persistence and Degradability
 - No data available.
- 12.3 Bioaccumlative Potential
 - No data available.
- 12.4 Mobility in Soil
 - No data available.
- 12.5 Results of PBT and VPvB Assessment
 - Not applicable
- 12.6 Other Adverse Effects
 - Solid cells released into the natural environmental will slowly degrade and may release harmful or toxic substances. Cells are not intended to be released into water or on land but should be disposed or recycled according to local regulations.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 13: Disposal Considerations

13.1 United States/Canada:

- Recycling: Follow all applicable local, state and federal recycling requirements.
- Disposal: Follow all applicable local, state and federal disposal requirements.

13.2 European Union:

 The Enphase IQ Battery must be disposed of in accordance with relevant EC Directives and national, regional, and local environmental control regulations.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 14: Transport Information

- 14.1 Proper Shipping Name: Lithium ion batteries.
- 14.2 Hazard Class: 9 Miscellaneous Dangerous Goods.
- 14.3 Identification Number: UN3480
- 14.4 Packing Group: II
- 14.5 Packing Instructions: 965-IA (IATA Dangerous Goods Regulations), International Maritime Dangerous Goods Code: See Packing Instructions P903, LP903, Special Provision 188
- 14.6 Not allowed on passenger aircraft.
- 14.7 Environmental Hazards:
 - Lithium ion batteries are not classified as marine pollutants.
 - Follow all applicable local, state, and federal requirements when identifying additional environmental hazards.

Note: Battery has been tested in accordance with Sub-section 38.3 of the UN Manual of Tests and Criteria. Lithium ion battery test summary available upon request.

Date of Issuance: 13-April-2016 Date of Revision: 03-March-2023

Section 15: Regulatory Information

15.1 United States

- TSCA Status: All ingredients in these products are listed on the TSCA inventory.
- OSHA: The ingredients meet criteria as per 29 CFR 1910.1200
- EPCRA 302/304: None.
- EPCRA 311/312: Reportable in excess of 10,000 lbs.
- EPCRA 313: None.
- CERCLA RQ: None.

15.2 European Union

- 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: Not listed.
- Other EU Regulations
 - 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 and amended on 28 May 2015 by (EU) 2015/830.
 - Regulation (EC) No 1272/2008 classification, labelling and packaging of substances and mixtures (CLP)
- 15.3 Additional Regulatory Not provided elsewhere none.

Section 16: Other Information

Date of Issuance: 13-April-2016

Revision Date: 03-March-2023