SolarEdge CSS-OD Battery Cabinet 90 kWh Safety Datasheet

Version: 1.0

Product Name and Identification

Product Identifier	
Product Name:	CSS-OD Battery Cabinet 90 kWh
Product Model:	CSS-OU-090
Part Numbers:	CSS-OU-01-11-CA-90-01
Other Means of Identification:	• Rechargeable Lithium Iron Phosphate Battery (LFP) system • UN3480 – Lithium-Ion Batteries
Product Description	• Rated Energy: 90 kWh • Rated Voltage: 285-360 Vdc • Total Weight: 1233 kg • Dimensions: 1050 (W) x 1371 (D) x 2085 (H) mm

Product Description	
	The SolarEdge CSS-OD: Battery Cabinet 90 kWh is a lithium-ion battery consisting of one cluster (string) of 5 x Energy Modules & 1 Cluster Management Unit. Energy Modules are structured in a topology of 20S1P LFP cells. The battery cabinet is the protective case holding these clusters, including the battery cabinet management unit, HVAC & various detection & protection Sensors.

Product Use	
Identified Uses:	The product is to be used as a Commercial/Industrial Energy Storage System.
User Restrictions:	• Operating temperature range (ambient): -30°C to 50°C, 5~95%, non-condensing • Storing temperature range (ambient): -30°C to 50°C, 5~95%, non-condensing • Do not store close to heat sources, such as furnaces or open flames.

Emergency Telephone Numbers	
Regional Phone Numbers	See Appendix A

Legal Remarks	
General remark:	This information is provided as a service to our customers. The details presented are in accordance with our present knowledge. They are not contractual assurances of product attributes.
Legal remark (EU):	These batteries are not “substances” or “mixtures” according to EC Regulation No 1907/2006. Instead, they must be regarded as “articles”; no substances are intended to be released during handling. Therefore, there is no obligation to supply a safety data sheet according to Regulation (EC) 1907/2006, Article 31.

Safety Data Sheet Supplier Details	
Supplier Name:	SolarEdge Technologies, Ltd.
Address:	1 Ha'Mada St., Herzeliya, 4673335 Israel
Contact:	+972 3-763-0639

Hazards Identification

Classification: Lithium-Ion Batteries

Hazard statement: No danger in normal use & without damage.

Hazards caused by spilled internal cell materials and precautionary statements as following							
Classification			**Labelling**				**Hazard Statement Codes**
Hazard Class	**Hazard Category**		**Pictogram**		**Signal Word**	**Hazard Statement**	
			GHS	**UN Model Regulations**			
Aspiration Hazard	2			Not required	Warning	May be harmful if swallowed and enters the airways	H305
Acute Toxicity	3	Oral		Not required	Warning	Harmful if swallowed	H302
		Dermal				Harmful in contact with skin	H312
		Inhalation				Harmful if inhaled	H332
Skin Corrosion / Irritation	2			Not required	Warning	Causes skin irritation	H315
Serious Eye Damage / Eye Irritation	2 / 2A			Not required	Warning	Causes serious eye irritation	H319
Skin Sensitization	1,1A[a],1B[a]			Not required	Warning	May cause an allergic skin reaction	H317
Skin Corrosion/ Irritation	1 1A, 1B, 1Ca				Danger	Causes severe skin burns and eye damage	H314
Serious Eye Damage / Eye Irritation	1			Not required	Danger	Causes serious eye damage	H318

Composition / Information on Ingredients

□ Pure chemical ☒ Mixture

Chemical Name	CAS No.	Weight – %	Remark
Lithium iron phosphate (LiFePO4)	15365–14– 7	20 – 40	–
Lithium hexafluorophosphate	21324–40–3	10 – 20	–
Aluminum	7429–90–5	10 – 20	–
Graphite	7782–42–5	10 – 20	–
Copper	7440–50–8	7 – 13	–
Poly(vinyl chloride)	9002–86–2	1 – 5	–

First–Aid Measures

Under normal circumstances, lithium-ion batteries are not harmful when they come into contact with the eyes or skin. However, if there is a leak of internal hazardous substances, precautions should be taken if body parts come into contact:

After Skin Contact: Immediately wash skin with soap and copious amounts of water.

After Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids.
Get prompt medical attention.

After Inhalation, evacuate to an area with fresh air. If someone is having difficulty breathing, provide them with oxygen. If a person is not breathing, give them artificial respiration.

After Ingestion: If swallowed, wash out the mouth with water, provided the person is conscious. Call a physician.

Fire – Fighting Measures

Characteristics of Hazard: Toxic fumes, gases, or vapors may evolve on burning.

Hazardous Combustion Products: CO, CO2, HF, phosphorus fluoride.

Fire – Extinguishing Methods and Extinguishing Media: Copious amounts of cold water are an effective extinguishing medium for lithium-ion batteries. Don't use warm or hot water. Don't use Halon-type extinguishing material. Dry powder, sand, and earth might be used.

Attention during the fire-extinguishing process: Firemen should wear gas masks and fire-fighting suits.

Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled:

1. If the battery material is released, evacuate personnel from the area until fumes dissipate.
2. Provide maximum ventilation to clear out hazardous gases.
3. Wipe the substance with a cloth, dispose of it in a plastic bag, and put it into a steel can.
4. The preferred response is to leave the area and allow the battery to cool and the vapors to dissipate.
5. Provide maximum ventilation.
6. Avoid skin and eye contact or inhalation of vapors.
7. Remove spilled liquid with an absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the lithium metal inside the battery, and to bury the discharged battery in soil.

Handling and Storage

The battery should not be opened, destroyed, or incinerated, since it may leak or rupture and release the ingredients it contains internally. Do not short-circuit terminals, overcharge the battery, force over-discharge, or throw to fire. Do not crush or puncture the battery or immerse it in liquids.

Precautions to be Taken in Handling and Storing

1. Avoid mechanical or electrical abuse.
2. Store preferably in a cool, dry, and ventilated area, which is subject to little temperature change.
3. Storage at high temperatures should be avoided.
4. Do not place the battery near heating equipment, nor expose it to direct sunlight for long periods.

Other Precautions

The battery may explode or cause burns if disassembled, crushed, or exposed to fire / high temperatures.
Do not short it or install it in reverse polarity.

Exposure Control and Personal Protection

Respiratory Protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

Ventilation: Not necessary under conditions of normal use.

Protective Gloves: Not necessary under conditions of normal use.

Other Protective Clothing or Equipment: Not necessary under conditions of normal use.

Personal Protection is Recommended for Venting the Battery: Respiratory Protection, Protective Gloves, Protective Clothing, and safety glass with side shields.

Physical and Chemical Properties

Appearance: Cuboid

Color: White

Odors: If leaking, smells of medical ether.

pH: Not applicable as supplied.

Flash Point: Not applicable unless individual components are exposed.

Flammability: Not applicable unless individual components are exposed.

Relative Density: Not applicable unless individual components are exposed.

Solubility (water): Not applicable unless individual components are exposed.

Solubility (other): Not applicable unless individual components are exposed.

Stability and Reactivity

Stability: Stable under normal temperatures and pressures.

Incompatibility: oxidizing agents.

Conditions to Avoid: Heat and open flame, short circuit, and water.

Hazardous Polymerization: Will not occur.

Decomposition Products: CO, CO2, HF, phosphorus fluoride.

Toxicological Information

Signs & symptoms: None. Unless the battery ruptures. In the event of exposure to internal contents, vapors or fumes may be very irritating to the eyes and skin.

Inhalation: Lung irritant.

Skin Contact: Skin irritant.

Eye Contact: Eye irritant

Ingestion: Poisoning if swallowed.

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to severe irritation, burning, and dryness of the skin may occur. Target Organs: nerves, liver, and kidneys.

Ecological Information

Mammalian Effects: None known at present.

Eco–Toxicity: None known at present.

Bioaccumulation Potential: Slowly biodegradable.

Environmental Fate: None known environmental hazards at present.

Waste Disposal

Waste Treatment: Recycle or dispose of in accordance with government, state & local regulations.

Attention for Waste Treatment: Used batteries should not be treated as regular trash. Avoid throwing them into fire or exposing them to high temperatures. Dissecting, piercing, or crushing them is also not recommended. The best approach recommended is recycling.

Transport Information

UN No.: UN 3480, UN 3481

Proper Shipping Name:

1. Lithium-ion batteries (Including lithium-ion polymer batteries) or
2. Lithium-ion batteries contained in equipment (Including lithium-ion polymer batteries) or
3. Lithium-ion batteries packed with equipment (Including lithium-ion polymer batteries).

Labels for Package: Class 9

ICAO / IATA	Can be shipped by air in accordance with International Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA), DGR Packing Instructions (PI) 965 Section IA, PI 966 Section I and PI 967 Section I, in appropriate with IATA DGR 64th (2023 Edition) for transportation.
IMDG CODE	International Maritime Dangerous Goods. Code (IMDG Code 40-20).
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 2023).
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail (RID 2023).
The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of the UN Manual of Tests and Criteria before being offered for transport	

Regulatory Information

- Dangerous Goods Regulations
- Recommendation on the Transport of Dangerous Goods Model Regulations
- International Maritime Dangerous Goods
- Technical Instructions for the Safe Transport of Dangerous Goods
- Classification and code of dangerous Goods
- Occupational Safety and Health Act (OSHA)
- Toxic Substance Control Act (TSCA)
- Consumer Product Safety Act (CPSA)
- Federal Environmental Pollution Control Act (FEPCA)
- The Oil Pollution Act (OPA)
- Superfund Amendments and Reauthorization Act Title III (302/311/312/313) (SARA)
- Resource Conservation and Recovery Act (RCRA)
- Safety Drinking Water Act (CWA)
- California Proposition 65
- Code of Federal Regulations》(CFR)
- In accordance with all Federal, State, and local laws

Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

Users should read this file carefully and correctly use the batteries. The Limited Product Warranty terms and conditions available at the SolarEdge website shall apply.

Appendix A: Regional Emergency Phone Numbers

Country	Local Number	Toll-Free Number
Australia	+61 2 9037 2994	1800 862 115
Austria	+43 1 3649237	0800 293702
Belgium	+32 2 808 32 37	
Canada	+1 703-741-5970	1-800-424-9300
Czech Republic	+420 228 880 039	
Denmark	+45 69 91 85 73	
Finland	+358 9 42419014	
France	+33 9 75 18 14 07	
Germany	+49 69 643508409	0800 1817059
Greece	+30 21 1176 8478	
Hungary	+36 1 808 8425	
Iceland	+354 539 0655	
Ireland	+353 1 901 4670	
Israel	+972 3-763-0639	
Italy	+39 02 4555 7031	800 789 767
Latvia	+371 66 165 504	
Lithuania	+370 5 214 0238	
Luxembourg	+352 20 20 24 16	
Macedonia	+389 2 551 7456	
Mexico		800 681 9531
Netherlands	+31 85 888 0596	
New Zealand	+64 9-801 0034	0800 425 459
Panama	+507 832-2475	
Poland	+48 22 398 80 29	
Portugal	+351 308 801 773	
Romania	+40 376 300 026	
Russia		8 (800) 100-63-46
Singapore	+65 3158 1349	800 101 2201
Slovakia	+421 2/330 579 72	
Slovenia	+386 1 888 80 16	
South Africa		080 098 3611
South Korea		080 822 1374
Spain		900 868 538
Sweden	+46 8 525 034 03	
Taiwan	+886 2 7741 4207	00801-14-8954
Ukraine	+380 94 710 1374	
United Kingdom	+44 20 3807 3798	
United States	+1 703-741-5970	1-800-424-9300