Information on Transport and Storage

BATTERY PACK SMART ENERGY
1 Transporting the Battery Pack

The ideal ambient temperature for the transport is between -20°C and +30°C. The special features of the Battery Pack are only guaranteed by the manufacturer if the indicated ideal ambient temperature range is observed during transport and storage and the maximum period for storage and transport at temperatures outside the ideal ambient temperature range does not exceed five days. The permissible ambient temperature of -30°C to +45°C must be observed at all times.

The Battery Pack is classified as dangerous goods: UN 3480 lithium-ion battery, class 9.

UN 3480 Dangerous goods designation
Class 9 Hazard risk category

Dangerous goods must be packed, transported and labeled for Europe in accordance with the regulations of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

Transporting New Batteries

For the transport of new batteries, an exemption in accordance with 1.1.3.1 c ADR or 1.1.3.6 ADR may apply. Generally, the ADR has to be applied.

Transporting Damaged Batteries

You will find further details, especially for the transport of defective batteries in the special regulation 376 in combination with the packaging instructions P908 in the ADR. Generally, the ADR has to be applied.

Transporting Batteries to Be dDisposed

You will find further details, especially for the transport of batteries to be disposed in the special regulation 377 in combination with the packaging instructions P909 in the ADR. Generally, the ADR has to be applied.

Exemption from the regulations:

- Exemptions related to the nature of the transport operation (1.1.3.1 c ADR)
- Exemptions related to quantities carried per transport unit (1.1.3.6 ADR)

provides the following information outlining the essential content of the mentioned regulations. This is not associated with legal advice services. Liability is not assumed for accuracy and completeness of these statements. The installer is still obligated to verify and observe all applicable legal provisions on his/her own responsibility. Installers can be exempted from the legal regulations when transporting lithium-ion batteries. The so-called "Exemptions related to the nature of the transport operation" 1.1.3.1 c ADR i.V. appendix 2 GGVSEB (Ordinance on the Transport of Dangerous Goods by Road, Rail and Inland Waterways) and the transport "within exempted amounts" (Exemptions related to quantities carried per transport unit) 1.1.3.6 ADR serve as a legal foundation.

Requirements for applying the "Exemptions related to the nature of the transport operation":

- The transport is part of the operational main activities (deliveries to or returns from construction sites related to repair and maintenance work).
- An amount of 450 liters per shipped item is not exceeded.
- The amount as per 1.1.3.6 (Exemptions related to quantities carried per transport unit) must not be exceeded.
- Measures to prevent exemption must be taken.
- General packaging regulations must be observed.
- Restrictions for certain materials must be observed.

Among other things, the installer is exempted from labeling the cargo transport unit and from special regulations for building and approving the cargo transport unit. Furthermore, sections 4.1.1.6; 4.1.1.7 and 4.1.6.8 ADR must be observed.
Requirements for applying the "Exemptions related to quantities carried per transport unit":

- 1,000 points (maximum permissible amount for transport category 2; 333 kg = 1,000 points) are not exceeded
- 2 kg of fire extinguisher per vehicle
- Marking and labeling of the packages
- Transport document with accurate dangerous goods information (exemption 18 GGAV (Hazardous Goods Exemption Provision for Germany))
- Observe all regulations of the ADR except for:
  - ADR certification
  - Labeling of the vehicle
  - Written instructions

The following points must also be verified and observed:

- Properly securing the load
- Training of the driver (documentation as per 1.3.3 ADR)
- Prohibiting the driver from opening the shipped items
- No smoking during the loading process
2 Storage of the Battery Pack

The Battery Pack Smart Energy is referred to as Battery Pack in this document.

Observer the maximum storage period for commissioning

To benefit from the full performance of the Battery Pack, it has to be commissioned in the period defined in the liability conditions.

What Should Be Observed during Storage?

To minimize the risks during storage, the following points must be observed:

- Each individual battery cell of the Battery Pack can potentially cause a fire.
- Any damage to the Battery Pack will increase the fire risk.
- Store as few Battery Packs together in one place as possible.
- Store the Battery Pack in a dry location.
- Handle the packages with care.
- Avoid transporting the Battery Pack unnecessarily.
- Ideal ambient temperature for storage and transport: -20°C to +30°C
- Permissible ambient temperature for storage and transport: -30°C to +45°C
- The maximum period for storage and transport at temperatures outside the ideal ambient temperature range: 5 days. During this period, the indicated ideal ambient temperature range has to be observed during transport and storage.
- Relative humidity, non-condensing: 5% to 95%
- Maximum altitude above MSL (Mean Sea Level): ≤ 3,000 m
- Clearly label the storage room from the outside as a lithium-ion battery storage location, including reference to metallic lithium for the information of the fire department (possibly inform the fire department in advance).

Handling Damaged Batteries

Contact the SMA Service Line immediately when detecting any damage to discuss further actions.

If batteries are known to have heated up during operation or if their enclosure is visibly damaged or deformed, store the batteries separately. Such batteries must be treated as potentially explosive and appropriate protective clothing must be worn.

Extinguishing Lithium-Ion Batteries

Two options for extinguishing burning lithium-ion batteries are under discussion.

- Extinguishing with water
- Covering with sand, oil, CO₂ and/or extinguishing with a water extinguishers etc.

In order to be legally protected, wholesalers and installers are advised to inquire with the appropriate authorities and organizations about the applicable requirements in the respective catchment area (insurance, regional council, municipal fire brigade).
3 Returning the Battery Pack

If problems are encountered in connection with the Battery Pack, customers are free to contact the SMA Service Line. Depending on the diagnosis, the SMA Service Line employees will take care of the return shipment or disposal. The following basically applies: SMA Solar Technology AG will take back old batteries from customers pursuant to § 8, section 1 of the German Battery Act concerning the Placing on the Market, Collection and Environmentally Compatible Waste Management of Batteries and Rechargeable Batteries. The Battery Pack can be packed and transported by persons trained in accordance with section 1.3 ADR once the electrical endurance of the Battery Pack has expired. Suitable packaging can be requested from SMA Solar Technology AG.