

# Graphical instructions for using lead-acid batteries

What should I read before using the lead-acid batteries?

Please read this documentation carefully and completely before performing any tasks using the lead-acid batteries. This documentation contains important information regarding safe and correct unpacking, storage, installation commissioning, operation and maintenance of lead-acid batteries.

How to identify a lead-acid battery?

Furthermore all lead-acid batteries have to be marked with a crossed-out wheellie bin and with the chemical symbol for lead Pb shown below. In addition, the ISO- recycling symbol is marked. The manufacturer, respectively the importer of the batteries shall be responsible for the attachment of the symbols.

What is the construction of a lead acid battery cell?

The construction of a lead acid battery cell is as shown in Fig. 1. It consists of the following parts : Anode or positive terminal (or plate). Cathode or negative terminal (or plate). Electrolyte. Separators. Anode or positive terminal (or plate): The positive plates are also called as anode. The material used for it is lead peroxide ( $PbO_2$ ).

What are the applications of lead - acid batteries?

Following are some of the important applications of lead - acid batteries : As standby units in the distribution network. In the Uninterrupted Power Supplies (UPS). In the telephone system. In the railway signaling. In the battery operated vehicles. In the automobiles for starting and lighting.

What is a lead acid battery?

A lead acid battery is a number of cells filled with a mixture of sulfuric acid and water called electrolyte. The electrolyte covers vertical plates made of two types of lead. Chemical action between the electrolyte and the lead creates electrical energy. Volt (V): the standard measure of electrical potential.

What happens if you eat a lead acid battery?

Lead and its compounds used in a lead acid battery may cause damage to the blood, nerves and kidneys when ingested. The lead contained in the active material is classified as toxic for reproduction. 12. Ecological Information This information is of relevance if the battery is broken and the ingredients are released to the environment.

Standard EN 50272-2 included safety requirements for batteries and battery installations and describes the basic precautions to protect against dangers deriving from electric currents, leaking gases or electrolytes. The batteries have to be labelled with the symbols listed under section 15. SECTION 3. COMPOSITION AND INFORMATION ON MAIN INGREDIENTS

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This documentation contains important information regarding safe and correct unpacking, storage, installation commissioning, operation and maintenance of lead-acid batteries. Non-compliance ...

This documentation contains important information regarding safe and correct unpacking, storage, installation commissioning, operation and maintenance of lead-acid batteries. Non-compliance with these safety instructions can lead to severe personal injury and material damage.

Read these instructions in their entirety before performing any work on or around batteries. c. Keep the vent plugs firmly in place at all times except when adding water or taking hydrometer and temperature readings. Keep all factory installed insulators in place to prevent the exposure of live electrical parts. d.

Lead-acid batteries have three significant characteristics: They contain an electrolyte which contains dilute sulphuric acid. Sulphuric acid may cause severe chemical burns. During the charging process or during operation they might develop hydrogen gas and oxygen, which under certain circumstances may result in an explosive mixture.

Lead-acid battery filled with diluted sulphuric acid Data on the manufacturer: Telephone, Facsimile, etc. 2. Hazards identification No hazards in case of an intact battery and observation of the instructions for use. Lead-acid batteries have significant characteristics: - They contain diluted sulphuric acid, which may cause severe acid burns. 3 ...

This manual contains important instructions for Flooded Lead-Acid Battery Systems that should be followed during the installation and maintenance of the battery system. Only a qualified EnerSys service representative who is knowledgeable in batteries and the required precautions should perform servicing of the batteries. Keep unauthorized personnel away from batteries. ...

Construction of Lead Acid Battery. The construction of a lead acid battery cell is as shown in Fig. 1. It consists of the following parts : Anode or positive terminal (or plate). Cathode or negative terminal (or plate). Electrolyte. ...

Standard EN 50272-2 includes safety requirements for batteries and battery installations and describes the basic precautions to protect against dangers deriving from electric currents, ...

Lead sulphate ( $PbSO_4$ ) combines with Water ( $H_2O$ ) and generate Pb,  $PbO_2$  and  $H_2SO_4$  (Sulphuric Acid).! In this phase, the Lead Sulfate is removed from the battery plates, and the Sulphuric Acid substitutes water, bringing the electrolyte to its initial level. With a few exceptions, current vehicles are only equipped with 12V starter batteries.

Lead-acid battery, filled with dilute sulfuric acid SUN Battery Hong Kong Ltd. Unit 1310, Asia Trade Centre 79 Lei Muk Road, Kwai Chung; Hong Kong Telefon: 0085227084682 Telefax: 0085222897896 2. Hazards

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identification No hazards in case of an intact battery and observation of the instructions for use. Lead-acid batteries ...

Charge After Each Use to Maximize Battery Lifespan. Lead-acid batteries perform best when they are kept in a charged state. After using your battery, especially if it has been deeply discharged, charge it as soon as possible. Deep discharges (below 50% state of charge) can lead to sulfation, where lead sulfate crystals form on the battery plates, reducing ...

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Always follow the manufacturer's instructions and use appropriate personal protective equipment when handling lead-acid batteries. In short, by paying attention to the details of lead-acid battery use, maintenance and storage, you can ensure that you get maximum performance and durability from your batteries, thereby protecting your investment and ...

It is important to store and operate sealed lead acid batteries in a cool environment to minimize temperature-related degradation. 2. Maintain Proper Electrolyte Levels. If your sealed lead acid battery requires maintenance, make sure to regularly check and maintain the proper electrolyte levels. Low electrolyte levels can lead to irreversible ...

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