

# SEALED LEAD-ACID BATTERIES

## BATTERY STORAGE

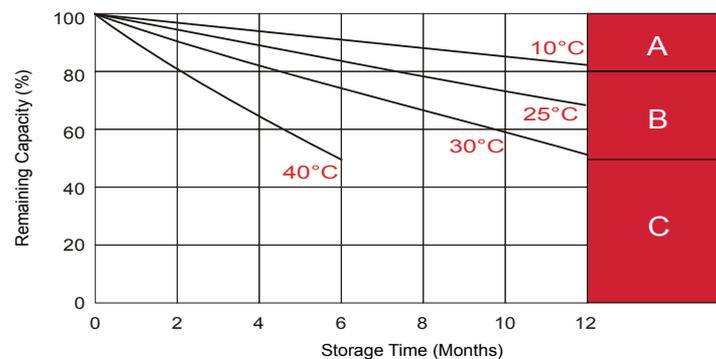
**CANBAT** 

## Sealed Lead Acid Battery Storage

Low internal resistance and special alloys in the electrodes assure a low self discharge rate and, consequently, a long shelf life. If kept at 20°C (68°F), about 60-70% of the nominal capacity remains after one year of storage. Due to the self-discharge characteristics of this type of lead acid batteries, it is imperative that they be charged within 6 months of storage, otherwise permanent loss of capacity might occur as a result of sulfation.

The rate of self-discharge varies with the ambient temperature. At room temperature (20°C (68°F)), it is about 3% per month. At low temperatures it is nearly negligible. However, at higher ambient temperatures, self-discharge increases. To obtain maximum battery life and performance, batteries should be recharged as soon as possible after each use, and must not be stored in a discharged state. If possible batteries should be stored at 20°C (68°F) or lower, and recharged every six months when not in use.

## Discharge capacity Vs Ambient temperature curve



- A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
  2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
  3. Charged for 8~10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.

ALL DATA IS SUBJECT TO CHANGE WITHOUT NOTICE

## Important Notes

When completely discharged, the electrolyte is reduced nearly to water. Freezer storage can freeze the electrolyte and damage the lead acid battery. After the last deployment or battery use, fully recharge the battery before storing. Although the battery can be used in any position, it should be stored upright. The battery case does not need to be disassembled for storage.

Check the battery periodically for excess gas production, and release any accumulated gas bubble. During extended storage at elevated temperatures, gas production is more significant; in these conditions, the battery should be stored with the fill valve cap removed. Some oil may be lost, but can be replaced prior to actual use. To minimize oil loss during storage attach a length of tubing to the fill valve.

Storage at a low ambient temperature reduces the self-discharge rate. Higher temperatures will cause the battery to self-discharge more rapidly and produce excess gas, which should be vented. Long term exposure to sunlight (UV radiation) can eventually cause some degradation in the mechanical properties of the urethane diaphragm. Avoid storing the battery in full sunlight for extended periods. Cover the battery for periods of exposure of longer than a week or two. The ABS plastic case is made of polyethylene which is impervious to most oils and solvents. The connectors are molded neoprene; contact with damaging oils or solvents (e.g. diesel oil or organic solvents) should be avoided.