

Charging Instructions

Storage and Refreshing Charge

1. After receiving the batteries, unpack, install and charge them as soon as possible. If this is not possible, store the batteries fully-charged in a dry, clean, cool and frost-free location. Excessively high storage temperatures may result in accelerated self-discharge and premature ageing. Do not expose the batteries to direct sunlight and rain.
2. If the cells/batteries are to be stored for a long period of time, to prevent damage to the batteries, an Refreshing charge must be given after a maximum storage period of six months, If stored at 27 °C or 3 months if stored at 36°C or 2 months if stored at 45°C or if the Open Circuit Voltage of any cells drops to 2.100V. Calculate this exact time starting on the day of delivery.
3. Failure to observe these conditions may result in sulfating of the electrode plates and significantly reduced capacity and service life of the battery.
4. Battery recharge during storage time should be carried out max. twice. The battery should be operated in continuous float charge mode thereafter. Battery service life commences with delivery of the battery or batteries from the HBL plant.

Storage times have to be added completely to the service life.

Freshening Charge

1. Unpack and Check all the stored cells visually for any external damage.
2. Check Vent Plug tightness with HBL recommended tool and also check any damages, dusts, etc.... spread on vent plugs
3. connect the the stored cells as per GAD recommended by HBL for charging. Tighten the terminal bolts with a Torque Wrench for a torque value of 10 Nm
4. Use only insulated tools and observe safety precautions. Connect it to SMPS charger with correct polarity
5. Measure the Open Circuit Voltage (OCV) for each cell and record it in a separate Reading sheet.
6. Then charge the Battery Bank in Boost mode.
7. Readings will be monitored and recorded in separate reading sheet for each B
8. After completing the charging of Battery Bank, the Inter connecting links and Looping Cables are to be dismantled and batteries are to be packed neatly.

Charging Parameters:

Description	Float Application	Cyclic Application
Float charging voltage @27°C	2.250 V/cell	2.270 V/cell
Boost charge voltage @ 27°C	2.300 V/cell	2.350 V/cell
Equalizing charge voltage @27°C	2.350 V/cell	2.350 V/cell
Charge current with respect to rated C 10 capacity	Min: 10% to Max: 20%	
Charge current with respect to rated C 10 capacity	Current drawn by the battery is > 3% of battery	
Low voltage disconnect	Shall be set @ 1.850 V/cell	