

TEMPERATURE COMPENSATION

Follow the vehicle manufacturer's instructions when dismantling the battery from the vehicle. The battery should be charged only in a well-ventilated place without direct sunlight.

Before charging the battery needs time to adapt its temperature with the surrounding temperature. Usually the battery temperature is adapted after 12-24h.

Colder temperatures generate a worse charge acceptance so there is a need to increase the charging voltage.

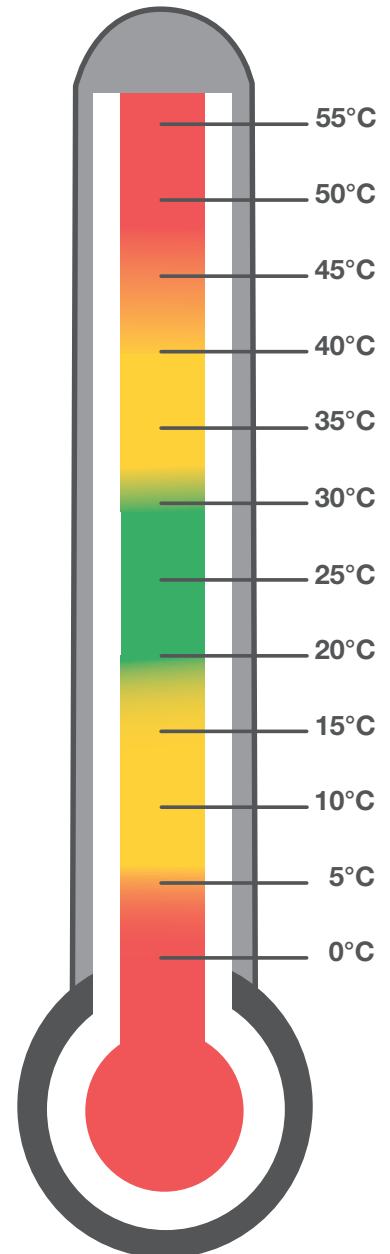
Hot temperatures result in danger of thermal runaway, which causes excessive overcharge of the battery. That will lead into acid leakage and in extreme cases an explosion is possible.

Therefore it is essential to lower the charging voltage during higher temperatures.

The recommended temperature range for charging is between +5°C and +40°C. The optimal temperature range for charging is between +20°C and +30°C. At +25°C the recommended charging voltage of the data sheet has to be used (usually it is at 14,40V) and needs to be adjusted according to temperature with -24mV/K rise. The charging should be limited to 24h. Charging at higher temperatures than +40°C is not recommended.

If necessary, the charging voltage shall be lowered according to the temperature and the charging shall be limited to max. 6h. If the temperature is higher than +55°C during charging, the charging shall be stopped so the battery can cool down again.

To enable faster charging, the maximum charging voltage can be used according to the data sheet at the temperature of +25°C (mostly 14,80V) and the charging has to be limited to maximum 24h. Similarly this charging voltage needs to be adjusted according to the temperature with -24mV/K rise. Over +30°C the charging time should be limited to max. 6h and over +40°C the higher charging voltage should not be used for safety reasons.



Please note:

The information is based on a 12V lead acid battery, for a 6V lead acid battery the charging voltage has to be cut in half and with a 2V-cell the charging voltage has to be divided by 6. For safety reasons the charging of batteries at temperatures higher than +55°C is not allowed. In case of acid leakage during charging or strong heating of the battery (>+55°C) it is essential that the charging shall be stopped immediately. In general the charging should be voltage regulated. The maximum current is specified only for selection of a suitable charging device.

In case of usage of a special battery charger additionally the specifications of the producer of the battery charger have to be complied.

Representative charging voltage of 14,40V at +25°C and max. charging voltage of 14,80V at +25°C:

