

Abstract

**Gastightly sealed metal oxide/metal hydride
storage battery**

In a gastightly sealed metal oxide/metal hydride button storage battery, in particular a nickel/metal hydride button cell, the active material of an auxiliary electrode is composed of the same hydrogen storage alloy as that of the negative electrode, to which the auxiliary electrode is electrically short-circuited. As a result, the auxiliary electrode can maintain both the oxygen consumption and, in the event of polarity reversal of the cell, the hydrogen consumption. As a result of a strongly hydrophobic adjustment of the auxiliary electrode and an only weakly hydrophobic or hydrophilic adjustment of the negative electrode by means of hydrophobic or hydrophilic binder additions, respectively, and as a result of adding highly conducting metal powder (Cu or Ni) to the mass of the negative electrode, a high gas-consumption rate in the event of overcharging and polarity reversal and simultaneously a good discharge capacity are obtained even at high currents (up to 2C A). The internal cell pressure of a 250 mAh button cell does not exceed 3 bar either during overcharging or during overdischarging at 0.2C A (= 50 mA) and is consequently not critical.

