

## 2. MATERIAL CHARACTERISTICS

### - UNION BATTERY

#### 2.1 PLATE

The positive and negative plates are made of lead oxide pasted on grids of Pb – Ca alloy that can be recharge quickly.

Characteristics:

common use of 6V, 12V series

PARAMETER		GRID	PLATE (ACTIVE MATERIAL)
QUALITY OF THE MATERIAL		CA – ALLOY LEAD	PURE LEAD
PURITY	Pb	Remained	Min. 99.99%
	Ca	0.1 ± 0.01 %	-
	Ag	-	Max. 0.002%
	Cu	-	Max. 0.002%
	As	-	Max. 0.002%
	Sb + Sn	0.45 ± 0.15 % (Sn only)	Max. 0.005%
	Zn	-	Max. 0.002%
	Fe	-	Max. 0.002%
	Bi	-	Max. 0.005%
	Al	0.025 ± 0.005 %	-

#### 2.2 SEPARATOR

Absorptive Glass Mat (AGM) with high durability and thermos-ability is used for separators, which absorbs electrolyte and retains excellent conductivity.

Characteristics:

Parameter	Contents
Semblance	White, no pin holes and no thicker fiber bundles
Thickness	Thickness tolerance ± 0.05 mm
Penetration speed	> 30 mm / min
Solution absorptivity	> 1200 %
Porosity	>90%
Max. pore diameter	< 26
Acid Extractable	< 3% of weight loses in sulphuric acid of 30%
Electric Resistance	< 0.001 Ω • dm <sup>2</sup> /mm
Tensile strength	> 200 (g/10mm)
Iron content	<0.006%