



The **Wise** Choice



EASY RECOVERY
AFTER IDLE PERIOD



LOWEST ELECTRICITY
CONSUMPTION IN
RECHARGING



LESS FUMES
GENERATION



5% EXTRA CAPACITY
& BACKUP WRT RATED
CAPACITY



MAINTENANCE
FREE BATTERY



CONSISTENT BACKUP
THROUGHOUT LIFE



LOW SELF
DISCHARGE

SEALED MAINTENANCE FREE BATTERY (200Ah @ C20)

POWER ON

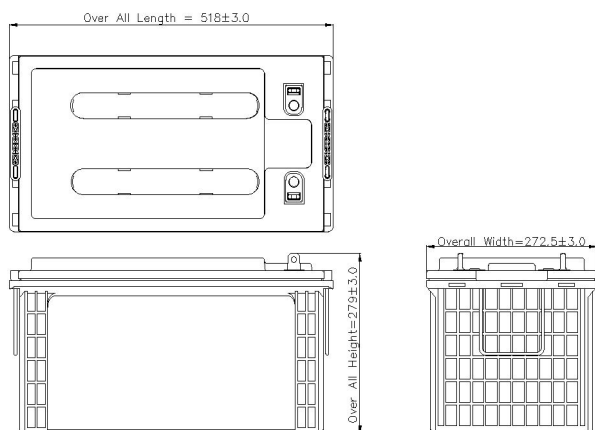


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TECHNICAL SPECIFICATION - Sealed Maintenance Free Battery



Product Features :

1. Robust Tubular with High Pressure Diecasted spine - resulting low rate of spine corrosion.
2. Spill Proof Vent Plug- Resulting in no spillage on Top and low controlled acid fumes.
3. Optimized Negative paste receipte for fast charge acceptance.
4. Consistent backup throughout life.
5. Excellent behavior in PSOC condition as compare.
6. Low Self Discharge.
7. Excellent performance on deep cyclic application.
8. Very High Design & Service Life.
9. Low water loss.

Technical Specifications

Model	Nominal Voltage	Rated Capacity 20 Hr @ 27°C [Ah]	Dimensions in mm			Gross Weight [Kg] [±3%]	Terminal Type
			Length [± 3 mm]	Width [± 3 mm]	Height [± 3 mm]		
EM200SMF [12 V 200 AH @ C20]	12	200	518	272	279	63.3	L

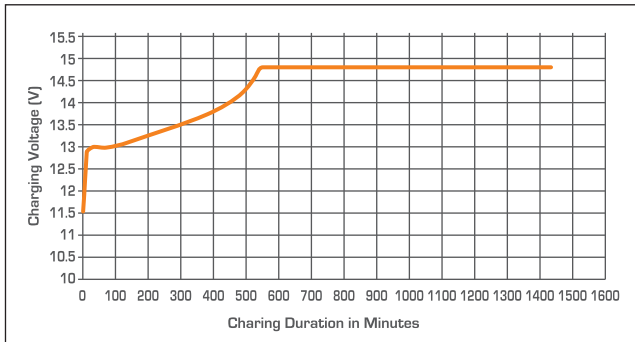
Electrical Parameters & Charging Profile

Battery Specified Capacity Test @ 27 °C							
Model	C20 @10.5V	C10 @10.5V	C7 @10.5V	C5 @10.5V	C3 @10.5V	C1 @10.5V	Energy Kwh
EM200SMF [12 V 200 AH @ C20]	200	180	165	150	129	90	2.4
Ah & Wh Efficiency							
Ah Efficiency	>90%		Wh Efficiency			>75%	

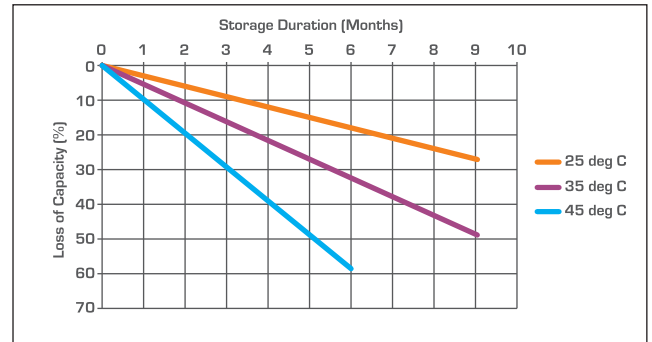
IMS Integrated Management System Certified with TUV & APAVE India for Design & Manufacturing of Lead Acid Battery

- Poly Components Material :- Polypropylene Co polymer
- Watering system :- Individual to every cell in Monobloc
- Color :- Blue
- Testing Parameters :- IS 13369:1992 & IEC 60896-11 & IEC 61407-1

Charging Profile



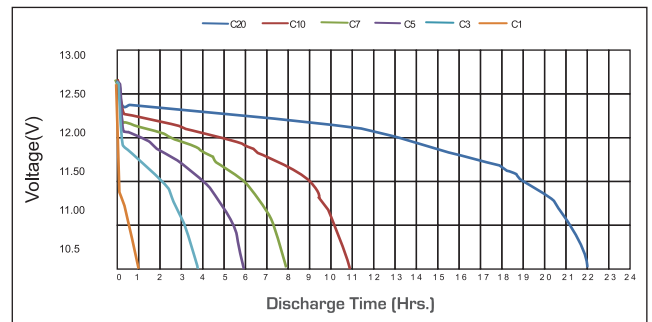
Self Discharge Characteristics @ Different Temperature



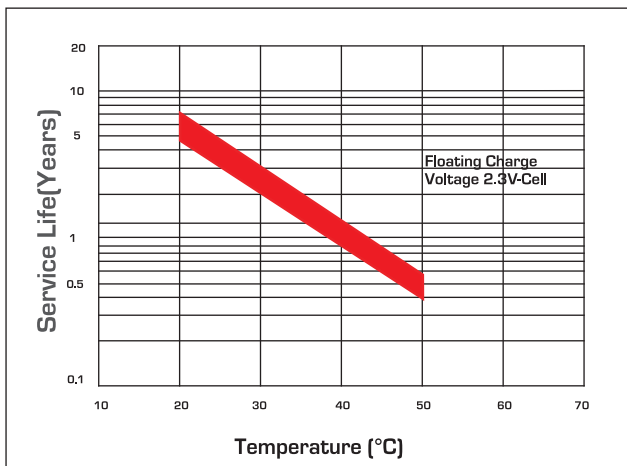
State of Charge Measure of Open-circuit Voltage @ 27°C

State of Charge	Specific Gravity	Voltage
100%	1.245-1.270	12.55V-12.75V
75%	≤ 1.225	≤ 12.4V
50%	≤ 1.190	≤ 12.1V
25%	≤ 1.155	≤ 12.0V
0%	1.120	11.8V

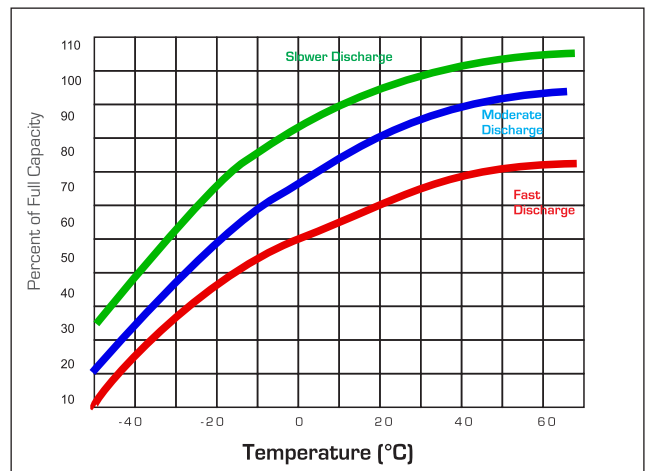
DISCHARGING CHARACTERISTICS at various rates @ 27°C



Service (Float) Life and Temperature



Expected Capacity vs Temperature



Eastman Battery Manufacturing Certified by TUV India

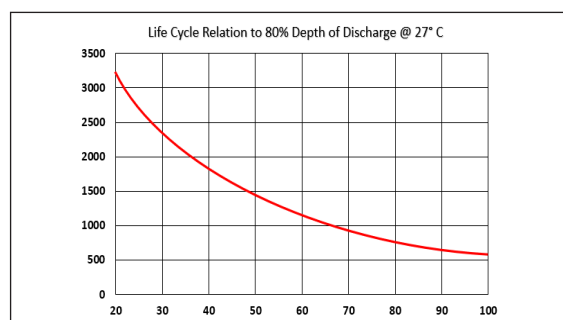


TECHNICAL SPECIFICATION - Sealed Maintenance Free Battery

Specific Gravity & Self Discharge w.r.t. Temperature

CHARGING TEMPERATURE COMPENSATION	Add	Subtract
	0.005 volt per cell for every 1°C below 25°C 0.0028 volt per cell for every 1°F below 77°F	0.005 volt per cell for every 1°C above 25°C or 0.0028 volt per cell for every 1°F above 77°F
OPERATIONAL DATA	Operating Temperature	Self Discharge
	-4°F to 131°F (-20°C to +55°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%.	As per discharge Graph

Expected Life



Charging Instructions

Charger Voltage Settings (at 77° F/ 25°C)			
System Voltage	12V	24V	48V
Maximum Charge Current	0.2C10		
Minimum Charge Current	20Amp.		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.6	29.2	58.4
Float Voltage	13.8	27.6	55.2
Equalization Voltage	16	32	64
NOTE: 1) Do not install or charge batteries in sealer or non-ventilated compartment. Constant under or overcharge will damage the battery and shorten its life as any battery. 2) Maximum two strings are allowed in parallel connections.			
Periodic Charge	Provide a periodic fresh charge to maintain a SOC grater than the threshold of 80%		

Comparison in between Eastman TTC & AGM VRLA

S.No	Parameter	Eastman Tall Tubular Conventional	AGM VRLA
1.	Plate technology	Tall Tubular Plate	Flat Pasted Plate
2.	Life W.R.T. Application	Excellent performance on cyclic application	Not good for deep cycle application
3.	Application	"Power Backup solution-solar/Inverter/UPS suitable for float application above 1 Hours discharge rate"	"Power Backup Inverter/UPS suitable for float application and Stand by application"
4.	Electrolyte	Free Flow Electrolyte	Electrolyte in Between AGM
5.	Water Loss	Low	Negligible
6.	Water Top up	Low Water Top	No water Top up required
7.	Life Extension	Long life with regular water top up	Not Applicable
8.	Self Discharge	Low < 3.0%	Very Low < 2.0%
9.	"Life Cycle w.r.t. 80% DOD@27°C "	650 cycles	450 Cycles
10.	Recovery in PSOC	Excellent	Low
11.	Charger Setting	Generic set point for cahrger	Required special set point for chargers
12.	Operating Temperature Range	- 20 Degrees to + 55 Degree	- 15 Degrees to + 40 Degree
13.	Terminal type	L- Type Terminal	Stud Type Terminal