

Battery type	Climatic condition	Electrolyte final S.G.	Proportion of 1.840 acid to water	Electrolyte checking temperature
D7/9, D9, A7, A9	Below 27°C. (80°F.)	1.260	1:3.2	15.5°C. (60°F.)
F7, F9	Normally below 32°C. (90°F.)	1.260	1:3.1	15.5°C. (60°F.)
D7/9, D9, A7, A9	Above 27°C. (80°F.)	1.210	1:4.3	15.5°C. (60°F.)
F7, F9	Frequently above 32°C. (90°F.)	1.220	1:4.1	15.5°C. (60°F.)

PREPARING NEW BATTERIES FOR SERVICE

Batteries for the home market are supplied fully charged and should be recharged monthly until put into service, observing the recharge rates given on page 5.

Batteries for export markets are supplied "dry-charged" and must be filled with electrolyte of the correct specific gravity according to climate before being put into service. Note that the specific gravity and temperature standard of electrolyte for the "F" type battery is different from that of the "D" and "A" types.

Dry-charged batteries leave the manufacturer in a fully-charged condition but may lose some of the charge slowly in storage. Initial charging after filling is not normally necessary, but a freshening charge at the recharge rate for four hours is advantageous if time permits.

Preparation of electrolyte

Electrolyte of the required specific gravity is prepared by mixing distilled water and concentrated sulphuric acid, usually of 1.840 specific gravity. The required, quantity of electrolyte for each size of battery:—

Battery type	Capacity per cell. ccs.	Total battery capacity	
		Litres	Pints Imp.
A7	330	2.00	3.5
F9	375	2.25	4.0
D9	380	2.3	4.0
F7	400	2.4	4.25
A9	410	2.46	4.3
D7/9	437	2.62	4.6

The mixing must be done in a lead-lined, glass or earthen ware tank. Slowly add the measured amount of acid to the measured amount of distilled water, stirring with a glass rod. Never add the water to the acid, as the resultant chemical reaction causes violent and dangerous spurting of the concentrated acid.

Allow the electrolyte to cool before filling the battery.

The approximate proportions of the acid and distilled water are given in the table above.

Filling dry-charged batteries

Remove the vent cover, and also the balls of the "F" type battery.

Fill each cell to the bottom of the tubes ("A" and "F" type batteries) or the top of the splash guard ("D" type) with the electrolyte prepared in accordance with the chart above.

Allow the battery to stand for twenty minutes. Re-adjust the levels with acid if necessary.

If not put into service immediately, charge the battery at the recharge rate (page 5) for a minimum of four hours, and until the voltage and specific gravity remain constant over three successive hourly checks and all cells are gassing freely. During recharging add distilled water if necessary to maintain the correct level.

Note; The vent cover of the "A" type battery must be in the closed position during charging.