

Technical Application Notes No. 3

Electrolyte and Lead Environmental Regulatory Information

MSE batteries are manufactured using lead, CAS No. 7439-92-1 and electrolyte (sulfuric acid) CAS No. 7664-93-9, which are subject to the reporting requirements of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), Sections 302, 311, 312 and 313 (40CFR 355 and 372). EPCRA is intended to provide the public with information about hazardous substances in their communities and to establish emergency response plans for chemical accidents. The Environmental Protection Agency (EPA) manages EPCRA.

MSE Valve Regulated (Sealed) Lead-Acid (VRLA) Battery Electrolyte Data for Environmental Reporting Purposes

MSE General Description

MSE Valve Regulated Lead-Acid batteries are non-spillable with pasted lead-calcium plates. These VRLA batteries are also called “starved electrolyte” batteries because they differ from the conventional “vented” or wet lead-acid cell by containing only a minimum amount of electrolyte (i.e., “starved electrolyte”) that is immobilized in an absorbent glass mat (AGM) separator. Thus, the cells are non-spillable, meeting the requirements of 49 CFR 173,159 (d), because all the liquid electrolyte is trapped (NO “free electrolyte) in the sponge-like AGM separator material and the cell case and cover are sealed together encasing the battery and all its internal components. **NOTE:** MSE valve regulated lead-acid batteries do NOT use a gelled electrolyte.

The end-user has NO contact with the batteries internal components, including the electrolyte, during installation and operation.

Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA)

Sulfuric Acid and Lead are reportable under Sections 302, 311, 312 and 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (40 CFR 355 and 372). Reportable Quantity: 500 lbs for sulfuric acid and 10,000 lbs for lead.

(Exception: Section 313, 100 lbs for lead). **NOTE:** State and local community reportable quantities for spilled sulfuric acid may vary. Consult local authorities for guidance.

The quantity of electrolyte, sulfuric acid and lead will vary by MSE battery model. Consult table on back page (page 2) for MSE model number and corresponding information.

NOTE: Battery electrolyte is a mixture of sulfuric acid and water. Only the amount of 100% sulfuric acid must be counted in the reportable quantity.

MSE VRLA Battery Electrolyte Data Table

Cell MODEL NUMBER	(V)	Total Weight Kg/(lbs)	Lead Weight Kg/lbs.	ELECTROLYTE/Cell			100 % SULFURIC ACID	
				SP. GR	Volume (ml)/gals.	Weight (kg)/lbs	Weight/Cell (kg)/lbs	Volume gals.
MSE-150	2	12.0 / 26.4	7.9 / 17.4	1.27	1,730 / 0.457	2.19 / 4.83	0.79 / 1.74	0.116
MSE-200	2	15.1 / 33.3	10.6 / 23.4	1.27	2,300 / 0.608	2.92 / 6.43	1.05 / 2.32	0.155
MSE-300	2	21.7 / 47.8	15.3 / 33.7	1.27	3,400 / 0.898	4.31 / 9.51	1.55 / 3.43	0.229
MSE-500	2	35.8 / 79.1	21.5 / 47.4	1.27	6,230 / 1.64	7.91 / 17.42	2.85 / 6.28	0.419
MSE-960	2	136 / 134	42.3 / 93.2	1.31	10,733 / 2.83	14.06 / 30.97	5.72 / 12.61	0.842
MSE-1040	2	64.4 / 142	45.6 / 100	1.31	11,013 / 2.91	14.42 / 31.77	5.87 / 12.95	0.864
MSE-1120	2	70.1 / 155	49.0 / 108	1.31	12,450 / 3.28	16.30 / 35.92	6.64 / 14.64	0.977
MSE-1200	2	73.7 / 163	52.3 / 115	1.31	12,649 / 3.34	16.57 / 36.49	6.75 / 14.87	0.992
MSE-1360	2	84.2 / 185	59.0 / 130	1.31	15,076 / 3.98	19.74 / 43.50	8.04 / 17.73	1.183
MSE-1440	2	88.0 / 194	62.3 / 137	1.31	15,417 / 4.07	20.19 / 44.48	8.22 / 18.13	1.209

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PROTECT THE ENVIRONMENT – RECYCLE LEAD-ACID BATTERIES AT AN EPA APPROVED RECYCLING FACILITY

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