

SINGLE CELL DEPASSIVATION

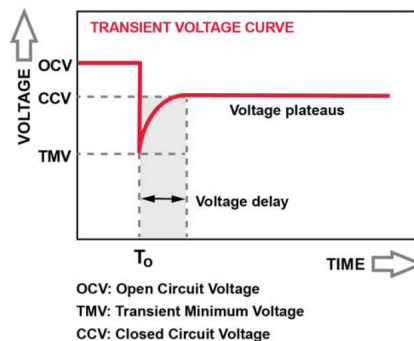
Lithium Thionyl Chloride (Li/SOCl₂) Suggested Depassivation Procedures

1. Check Open Circuit Voltage (OCV) of single cells. Minimum acceptable OCV $\geq 3.65V$
2. Apply the resistive load or constant current suggested below. Between +68°F - +77°F (+20°C - +25°C)
3. Remove the resistive load or constant current when the cell voltage reaches 3.20V cutoff, typically 30 seconds or less
4. If the cell does not reach 3.20V in 15 minutes, there is significant passivation, call Ultralife for additional instruction

CELL PART #	CELL TYPE	CONSTANT CURRENT	RESISTIVE LOAD	CUTOFF VOLTAGE
UHR-ER34615-X	D Spiral (High Rate)	167.0 mA	19 Ohms (1.00 watt)	3.20 V per Cell
UHE-ER34615-X	D Bobbin (Low Rate)	49.0 mA	66 Ohms (0.50 watt)	
UHR-ER26500-X	C Spiral (High Rate)	140.0 mA	23 Ohms (1.00 watt)	
UHE-ER26500-X	C Bobbin (Low Rate)	25.0 mA	130 Ohms (0.50 watt)	
UHR-ER14505-X	AA Spiral (High Rate)	52.5 mA	61 Ohms (0.50 watt)	
UHE-ER14505-X	AA Bobbin (Low Rate)	11.4 mA	280 Ohms (0.25 watt)*	

* Resistor power rating minimum

Example of depassivation:



Notice:

The constant current and resistive loads suggested for depassivation above are based on current densities of approximately 1.0 mA / cm² of common surface area in the Ultralife cells referenced. The 1.0 mA / cm² depassivation load level should not damage the cell or cause cathode freeze over damage at temperatures of +32°F (0°C) or higher. Depassivate battery packs at room temperature +68°F - +77°F (+20°C - +25°C). Every cell manufacturer has slightly different common surface area in the cells they produce. The above depassivation loads may not be appropriate for cells produced by other manufacturers. Contact the actual cell / battery pack manufacturer for specific depassivation procedures for the cells you are depassivating. Only the manufacturer can provide exact specifications.

Caution:

All caution must be used to avoid short circuiting cells when depassivating. Cell internal heating, venting, leaking, or rupture could occur. Call the cell or pack manufacturer for any questions. Due to the heat generated at the resistor, use resistors with the minimum power rating or more for depassivation and cathode freeze over check. Wound power resistors are recommended. Ensure that the heat generated by the resistor will not short the battery pack by melting wire or connection insulation. Do not leave the constant current or resistive load on the pack unattended, failure to remove the resistor or constant current lead will deplete the pack. Property of Ultralife Corporation. Only authorized reproduction of this document in its entirety including Ultralife logo and contact information. Application of additional company logo(s) unauthorized. Use of the data contained herein without credit and reference to Ultralife Corporation is unauthorized.