

Information about the Purchase of Consumable Items for Supercapacitor Fabrication

Sr. No	Parameters	Remarks
1.	End Use	The items from Serial No. 1-11 will be used for the fabrication of graphene ultracapacitor for the ongoing project.
2.	Detailed specification	As per Annexure - I
3.	Scope of supply & incidental services	The OEM/Vendors dealing with battery/supercapacitor consumable items are eligible to supply this item.
4.	Acceptance test	The material must match the technical specification as mentioned in Annexure - I. The technical specification will be verified after supply of each item.
5.	Qualification criteria if any	<ul style="list-style-type: none">➤ The supplied items should perfectly match with the technical specification as described in Annexure-I.➤ Proper printed catalogue in favour of the product must be enclosed with the bid.➤ The OEM/Distributors/suppliers must have to supply the samples for the item no. 1-9 along with the technical bids to the purchase section failing of which the bids will be rejected without evaluating the technical/price bids. In addition, the finally supplied items should match with the samples submitted along with the bid. Otherwise, the items will not be accepted for payment.➤ Part supply of the items is not allowed.

Payment Terms and Conditions: 100% Payment after delivery within 30 working days

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Annexure-I: Technical Specifications

Sl No.	Item	Specification
1.	Etched Al Foil	<ul style="list-style-type: none"> • Thickness: 20 μm • Thickness tolerance: $\pm 3\mu\text{m}$ • Width: 200 mm • Width tolerance: $\pm 10\text{mm}$ • Etching type: Chemically etching • Electrostatic capacity: $89 \mu\text{F}/\text{cm}^3$ • Tensile strength: $\geq 1.6 \text{ kgf}/\text{cm}$ $\geq 15.6 \text{ N}/\text{cm}$ • Residual salt concentration: $\leq 1.0 \text{ mg}/\text{m}^2$ • Purity of original foil: $\geq 99.7\%$ • Package: 1 Kg/Roll
2.	TF4030 Cellulose Separator	<ul style="list-style-type: none"> • Width: 60 mm • Length: 500 m • Thickness: 30 μm • Material: Cellulose • Package: $30\text{m}^2/\text{Roll}$
3.	18650 Cylinder Cell Case with Anti-Explosive Cap and Insulation O-ring	<ul style="list-style-type: none"> • 18650 Cylindrical Cell Cases for Li-Ion Cell with anti-explosive cap (built-in PTC) • Insulation O-ring • Top and bottom insulators • Dimensions: <ul style="list-style-type: none"> ✓ Case: 18 mm (OD) x 17.5 mm (ID) x 67 mm (H) ✓ Top Cap: 17.5 mm (D) x 4.05 mm (H) ✓ Top Insulator: 12.5 mm (D) x 0.19 mm (H) ✓ Bottom Insulator: 12.5 mm (D) x 0.19 mm (H)
4.	26650 Cylinder Cell Case with Anti-Explosive Cap and Insulation O-ring	<ul style="list-style-type: none"> • 26650 Cylindrical Cell Cases for Li-Ion Cell with anti-explosive cap (built-in PTC) • Insulation O-ring • Top and bottom insulators • Dimensions: <ul style="list-style-type: none"> ✓ Case: 26 mm (OD) x 25.5 mm (ID) x 68 mm (H) ✓ Top Cap: 25.5 mm (D) x 5 mm (H)
5.	Al tab strip	<ul style="list-style-type: none"> • Thickness: 0.1 mm • Width: 8 mm
6.	PVDF Binder	<ul style="list-style-type: none"> • Purity: $> 99.5\%$ • Melting Point: 160 – 168 $^{\circ}\text{C}$ • Solubility: Transparent and dissolvable • Moisture: $< 0.1\%$

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7.	Acetylene Black	<ul style="list-style-type: none"> • Apparent Specific Volume: 16~17 ml/g • Resistivity: $\leq 1.8 \Omega/\text{m}$ • pH Value: 6 ~ 8 • Ash Content: $\leq 0.2\%$ • Particle Size: 35 ~ 40 nm
8.	Super P Carbon	<ul style="list-style-type: none"> • Appearance: Powder • Color: Black • Specific Volume: 16~17 ml/g • Resistivity: $\leq 1.8 \Omega/\text{m}$ • pH Value: 6~8
9.	Activate Carbon	<ul style="list-style-type: none"> • BET Surface Area: 1500 ~ 1800 m^2/g • Capacity : 28 F/g • Capacity : 19 F/cc • Fe : 18 ppm
10.	Crimping Die for 26650 Cylinder Cell	<ul style="list-style-type: none"> • Body: Stainless Steel • Glove box compatibility: Yes • Sealing Die: for standard 26650
11.	18650 Tab to Cap Welding Head and base for the Ultrasonic Welding Machine	<ul style="list-style-type: none"> • Welding Area: 10 (L) mm \times 5 mm (W) • Pneumatic Control: Air pressure at 0.4 – 0.6 MPa • Input Voltage: 240V AC 50/60Hz • Power Consumption: 0 – 4200 W • Cathode welding lifetime: ≥ 3000000 • Anode welding lifetime: ≥ 1000000

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