

Questions & Answers:

1. What are the proposed fire suppression methods for sodium-ion related fire? Is oxygen released during SEI decomposition of the battery? Thanks.
Reply: Natron Blue Packs have been tested to UL9540A at cell level and demonstrated their chemistry is incapable of thermal runaway, therefore the standard form of fire suppression e.g. carbon dioxide or dry chemical. There will not be any SEI, therefore we believe there will not be oxygen released.
2. Any concerns with water suppression methods?
Reply: There are no concerns with water suppression for the Natron batteries.
3. How does this compare with the BYD sodium-ion batteries and are the batteries assessed based on HB38.3/UL1642/UL1973/UL9540?
Reply: Natron has been tested and certified to UL1973/UL9540A standards. We are not entirely sure of BYD exact sodium ion technology and are unable to make any related comparison. BYD sodium-ion technology is catered to EV so we expect it to be energy dense. Natron is power dense.
4. And at what temperature does the battery hit thermal runaway?
Reply: Our battery chemistry is incapable of thermal runaway.
5. What happens to a battery above 50 degrees Celsius temperature range?
Reply: Natron battery will still operate but at reduced performance.
6. Any flameproof enclosures required of IP 67 type mandated?
Reply: No.
7. Does PBA produce hydrocyanic acid gas at high temperature or at a specific PH?
Reply: The attached UL9540A report has the Gas Composition test on page 21.
8. What are the recommended fire suppression methods compatible with sodium-ion batteries?
Reply: Use water, alcohol resistant foam, dry chemical or carbon dioxide.
9. Is there any scenario where SEI short circuit takes place leading to gasses?
Reply: No.
10. Dendrites do not accumulate in sodium-ion batteries?
Reply: No.
11. For some PBA's potential would go up and down at some SOC. Isn't it difficult to know SOC from OCV?
Reply: We have conducted some test in our demo and found the SOC to be consistent with Natron Sodium-ion technology. Please contact us through info@bridex.fujielectric.com to make an appointment for demo.
12. So anode PBA (Mn one) without Na then the cell is assembled?
Reply: Sorry we are unable to understand this question.
13. How about lifetime (cycle number and calendar life) compared to LFP?
Reply: Natron Batteries capable of 50,000 cycles at 100% depth of discharge.
14. Do you use aluminum foil for anode?
Reply: Yes.

15. What are possible Wh/kg and \$/kWh (cell and pack) in the future?
Reply: Please refer to attached Natron Energy Brochure - BluePack Critical Power Battery - Specifications Rev 1.4 Part Number: ZZ-0007-00
16. Footprint & weight vs. Lithium one
Reply: This will depend on the duration of back-up required. We can deliver 250kW for 5 mins with 1 rack dimensions 800 x 1100 x 2100 in mm (W x D x H) approx. 1,100kg.
17. Is it gray hydrogen – the release gases?
Reply: No.
18. You said cyanide, will it not be harmful over longer term for people nearby?
Reply: The attached UL9540A report has the Gas Composition test on page 21.
19. Does it require more energy over 24hour for cooling
Reply: We need to understand what the cooling capacity load is to be able to calculate the Natron Battery energy requirements. We might not understand this question thoroughly so please do contact us at info@bridex.fujielectric.com to have a chat.
20. What kind of Electrolyte present in your cells
Reply: It is a sodium-ion based slurry paste.
21. If overcharge means what will happen?
Reply: Please see page 15 and 19 on attached UL9540A report.
22. Will the full cabinets expected by 2024 available with multiple number of blocks (to accommodate different UPS DC ranges) with a central neutral (+0-3 dc) option available?
Reply: Yes, we are currently developing the 3-wire version with locally available components.
23. Is there any data available for expected residual capacity after 10 years? 80%+? (What many DC required as calculation)
Reply: Expected 70-75% at 1C rate.
24. First cycle efficiency?
Reply: Round-trip Efficiency 1C-1C 99%
25. What kind of rxn mechanism?
Reply: We might not understand this question thoroughly so please do contact us at info@bridex.fujielectric.com to have a chat.
26. The system is included for battery monitoring?
Reply: Yes, our battery has a built-in simple Battery Monitoring System.
27. Price points of Lithium vs Sodium-ion Battery.
Reply: Please contact us at info@bridex.fujielectric.com to discuss your requirements.
28. I would like to have a demo.
Reply: Please contact us at info@bridex.fujielectric.com to make an appointment.