Lithium Batteries

Found in Hoverboards, RCs, Drones, Tablets & Cell Phones

Have you heard **60 major Airlines have banned Hoverboards as cargo**? And it's not because there's a worry about cruising down the aisle on climbout, it's because the Lithium (Li) batteries have an unfortunate history of bursting into flames. Measured as intense as 1348°C (2458°F), potentially melting through almost anything, they release toxic smoke and fumes and readily ignite anything nearby that can burn.

The Consumer Product Safety Commission is actively investigating these products for cause, and we'll keep an ear out for consumer guidance. Wisdom might indicate that if the Airlines and U.S. Safety Regulators are concerned, you should be too. Having a Li Battery "cook-off" is hazardous no matter where, and all home and personal users of Li batteries are advised to take basic precautions to minimize the chance of this happening, and also be prepared for the worst.

Lithium batteries may be found in many of the season's best Christmas gifts, like laptops, cell phones, Radio Controlled (RC) toys and their controllers, and drones. And the story is the same. Any charged Lithium battery is hazardous if the energy and hot toxins escape. As expected, in addition to the batteries in Hoverboards, all lithium batteries have limits on the size and kind that can be transported, particularly aboard aircraft. They also have specific guidance on how to charge, store, and dispose of them at home or anywhere.

- **Look for the Lithium Battery markings on your electronic devices.** Note where these batteries are stored. What could happen if it cooks off? Make sure others in and around their vicinity are aware.
- Store batteries and devices for more than a day at no more than 30%-50% charged, **away from any other flamable materials**, preferably in a cool (**less than 40°C, avoid direct sun, they are really temperature sensitive**), ventilated area on concrete or ceramic tile.
- More than 60% of Li battery fires occur during charging. Charge them on a ceramic, stone, or concrete surface in a well ventilated area away from flammables. **Charging Li batteries must be guarded!** Never leave a charging Li Battery unattended. Temperatures greater than 50°C , overcharging, and damage (toy crashes!) GREATLY in crease the chance of a fire. Use only a manufacturer provided or approved charger. ALWAYS use the cell balance functions if available.
- **Not for the trash can!** Expended Li batteries are toxic, but recyclable. Discharge them and tape the terminals to prevent a short. Take them to household hazardous waste, or return to the vendor. Do not puncture, incinerate, or destroy. There are already plenty of YouTube videos of Li batteries getting the ax you can view if you really need to see what a hot toxic mess looks like.
- For NPS applications, contact Your Hazardous Materials Coordinator, Kathy Franklin (x7661), or the NPS Lithium Battery coordinator Scott Giles (x7568) for NPS SOP and Navy requirements on purchasing and managing Lithium batteries for NPS projects.

For entertainment at Lithium Batteries' expense, check out SNL and CPSD:

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The Future of Hoverboards: Federal Safety Standard or Voluntary Safety Standard?