



# LITHIUM BATTERIES

## BE AWARE OF WHAT YOU BUY

Lithium-ion batteries are found in many consumer electronics, from power-tools to electric vehicles. Buying good quality batteries can keep your home and the Canadian transportation system safer.

### AFTERMARKET BATTERIES

Lithium-ion batteries from unrecognized brands or marketplaces (third-party) might be substandard, counterfeit or poorly manufactured, and can present an increased risk of fire.

In Canada, the transportation of lithium batteries is regulated to minimize the hazards that might occur. One criterion requires lithium batteries to pass a series of design tests in the [United Nations Manual of Tests and Criteria](#) to show they are safe for transport.

Transport Canada did extensive lab tests to research whether these lower cost third-party lithium-ion batteries are more likely to fail these safety tests than the original equipment manufacturer (OEM) batteries.

### WHAT WE FOUND



- Recognized brand, OEM batteries passed all safety tests.
- Half of all third-party batteries failed required safety tests, some explosively! These batteries were found on several major online marketplaces.

Third-party lithium-ion batteries, which are usually lower cost and thus appear more economical, are much more likely to be substandard, counterfeit or poorly manufactured, and **pose a higher safety risk during transportation and use** than the OEM batteries that passed the test.

There may be no clear visual signs that a particular third-party lithium-ion battery is substandard and there is a safety risk in purchasing these lower-cost, third-party batteries.

### Spot substandard batteries

- Much cheaper than the OEM battery
- From unrecognized brand
- Mis-aligned labels or labels with spelling mistakes
- Advertised specifications (voltage, amperage) differs from original battery

### Safety tips – What to do

- Purchase from the manufacturer or use devices that are listed by a qualified testing laboratory
- Follow the manufacturer's instructions
- Only use battery designed for the device
- Only use charging cord that came with the device
- Do not keep charging after it is fully charged
- Keep battery at room temperature
- Store batteries away from anything that can catch fire

## IF YOU NEED TO BUY AFTERMARKET BATTERIES

As a consumer, you can choose what you buy.  
Before purchasing lithium batteries, consider the following:



Substandard batteries were found on several large, online marketplaces.  
Not all sellers or item listings are trustworthy.



Buying batteries that are the same brand as the OEM battery, and are from a reputable seller

**Low risk of fire and explosion in transport and at destination**



Buying batteries from unknown brands and questionable marketplaces, usually much cheaper than OEM

**Higher risk of fire and explosion in transport and at destination**



For e-mobility such as e-scooters or e-bikes, please consult this public advisory from Health Canada:  
[Misuse or modification of lithium-ion batteries in e-mobility devices can be extremely dangerous - Canada.ca](https://www.canada.ca/en/health-canada/services/e-mobility-devices-lithium-ion-batteries.html)

## LEARN MORE ON LITHIUM BATTERIES

[Lithium batteries – Be aware of what you buy video](#)

[Battery safety: Lithium-ion batteries](#)

[Lithium battery transport research report](#)

[Travelling with Lithium Batteries by Air video](#)

[Shipping and importing devices containing lithium batteries](#)

[Transporting Batteries](#)

TRANSPORTATION OF DANGEROUS GOODS

TDG-TMD@tc.gc.ca