

FedEx Express Safely Ships Lithium Batteries

For decades, FedEx Express has been a safe and reliable transporter of items classified as dangerous goods (DG), including lithium batteries.

There are two types of lithium batteries. Lithium *metal* or *primary* batteries are non-rechargeable, single-use batteries. Wrist watch or flashlight batteries are examples (pictured right).



Lithium *ion* batteries are rechargeable. Examples are batteries for mobile devices or laptops (pictured left).

Both types of lithium batteries are widely used in products such as consumer electronic devices.

FedEx Express handles both types of properly identified batteries and products containing them.

FedEx as Responsible Shipper

Our company takes its responsibility as a transporter of dangerous goods very seriously. In fact, our internal procedures – which include the handling and shipment of lithium batteries – exceed regulatory acceptance rules.

What's more, we prohibit or restrict certain shipments that present a potentially elevated risk. For example, FedEx Express recently placed restrictions on shipping used hoverboards, including those removed from original packaging.

The vast majority of lithium battery incidents are from improperly prepared or undeclared hazardous goods shipments



To protect our employees, customers and assets, FedEx Express maintains a robust system to mitigate risk associated with these shipments.

Details about our mitigation system and other efforts follow.

Respected Employee and Customer Training

Our training and procedures are well-respected by government agencies with jurisdiction over our DG operations.

FedEx Express requires extensive training for all employees who handle DG shipments, and more than 5,000 DG specialists work at facilities throughout our global network.

DG specialists receive 40 hours of initial training and eight hours of recurrent training every 12 months. Their managers are also required to participate in dangerous goods training courses.



In addition, FedEx Express provides training to customers on procedures and regulations governing the shipment of lithium batteries. At a shipper's request, FedEx will conduct an on-site seminar on preparing, handling and shipping these batteries and other dangerous goods.

Shippers must register and be approved by our company before shipping lithium metal batteries in our network. Registration includes providing battery visuals and proposed packaging. Our proactive measures help ensure these shipments are properly declared and packaged.

More information about employee and customer dangerous goods training is [available here](#).



Protection Provided by our Innovative Fire Suppression System

In October 2009, FedEx Express unveiled the industry's first onboard automatic fire suppression system (FSS), pictured left, increasing international flight safety.

FSS protects aircraft, crew and customer shipments from fires started by several materials, including lithium, a combustible metal that burns at extremely high temperatures.

No other aircraft fire safety system in use today is as effective against this type of fire.

Installed on our Boeing 777 and MD fleets, the fire suppression system provides coverage for the entire main deck – not just dangerous goods unit load devices (ULDs).

The National Transportation Safety Board (NTSB) praised the system as a “tremendous accomplishment” and “a comprehensive system that can suppress or extinguish any type of fire that can occur onboard a cargo aircraft.”

FSS Enhancements

Continuous improvement is a key principle followed at FedEx Express to ensure processes and technologies meet our high service and safety expectations.

To this end, software and hardware modifications are being made in FSS-equipped aircraft to address identified potential issues, including false activations, system faults and ULD penetration device malfunctions.

These modifications began in November 2015 and should be complete by the end of FY16.

[Go here](#) to see other on-board safety measures, including fire containment covers (FCC), pictured right.



Innovation and Safety Continue Hand-in-Glove

We continue to invest in research and industry programs designed to enhance safety.

Efforts include innovative lithium battery packaging, the addition of Head-Up Display (HUD) goggles in all HUD-equipped aircraft (pictured below), and research on explosive- and fire-proof ULD technology.

More projects can be [found here](#).

Additional Resources

FedEx Express employees are encouraged to stay informed of company policies, procedures and technology related to the safe handling and shipment of dangerous goods, including lithium batteries. More information is available below.

- Check out [dangerous goods information](#) on the FedEx Safety site.
- Enter keyword 'battery' on fedex.com or [click here](#) for a brochure explaining required packing and shipping of batteries.
- Customers with questions about preparing dangerous goods shipments can call 1.800.GoFedEx or 901.344.3000 for answers.

