PED Safety Bag

Battery Fire & Smoke Containment Product

Lithium-ion batteries are widely used in electronic devices carried by passengers on board your flights.
However, in the event of a thermal runaway, these batteries can cause serious damage to the device and potentially lead to a fire and emergency landing.

That's where Accenture's solution comes in.

PED Safety Bag

Some information upfront

The Portable Electronic Device (PED) Safety Bag is used to manage incidents caused by thermal runaway of lithium-ion batteries in PEDs like notebooks and smartphones to improve safety.

Lithium-ion battery thermal runaway occurs when a cell, or area within the cell, achieves elevated temperatures due to thermal/mechanical failure, internal/external short circuiting, and electrochemical abuse.

In case of a thermal runaway on a plane, the PED Safety Bag can be used to avoid delays or an emergency landing. It contains the heat and smoke and allows for flight continuity.

- Instructions by IATA, FAA and EASA for carriage of passenger's lithium-ion batteries onboard. Batteries of a maximum of 160Wh are allowed on board.
- Numbers of PEDs on board are increasing and so is the risk of lithium-ion battery fires.
- UL Standard 5800 for PED Safety Devices was published in December 2020 to compare and categorize products and to define minimal standard safety requirements for PED Safety Devices.
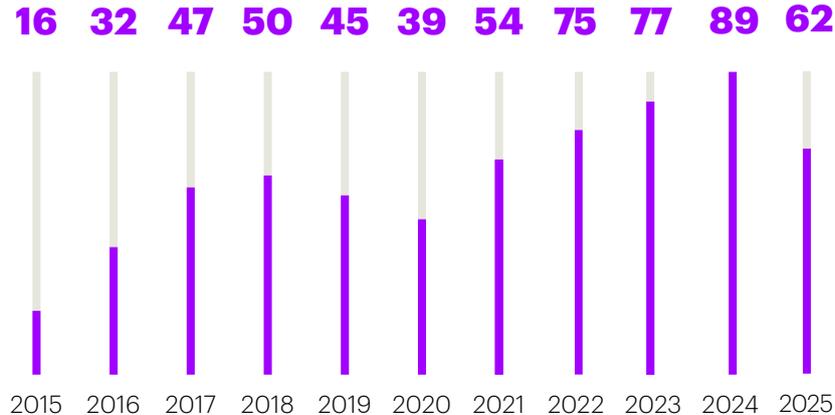
660 total verified incidents
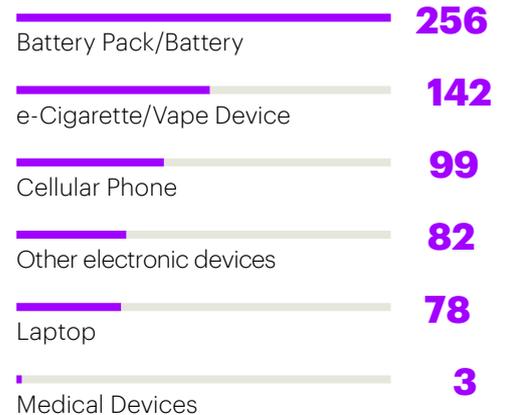
between March 2006 and September 2025 by the FAA.

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Verified incidents

Lithium battery incidents

16	32	47	50	45	39	54	75	77	89	62

2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

Category
Since March 2006

Battery Pack/Battery — 256

e-Cigarette/Vape Device — 142

Cellular Phone — 99

Other electronic devices — 82

Laptop — 78

Medical Devices — 3

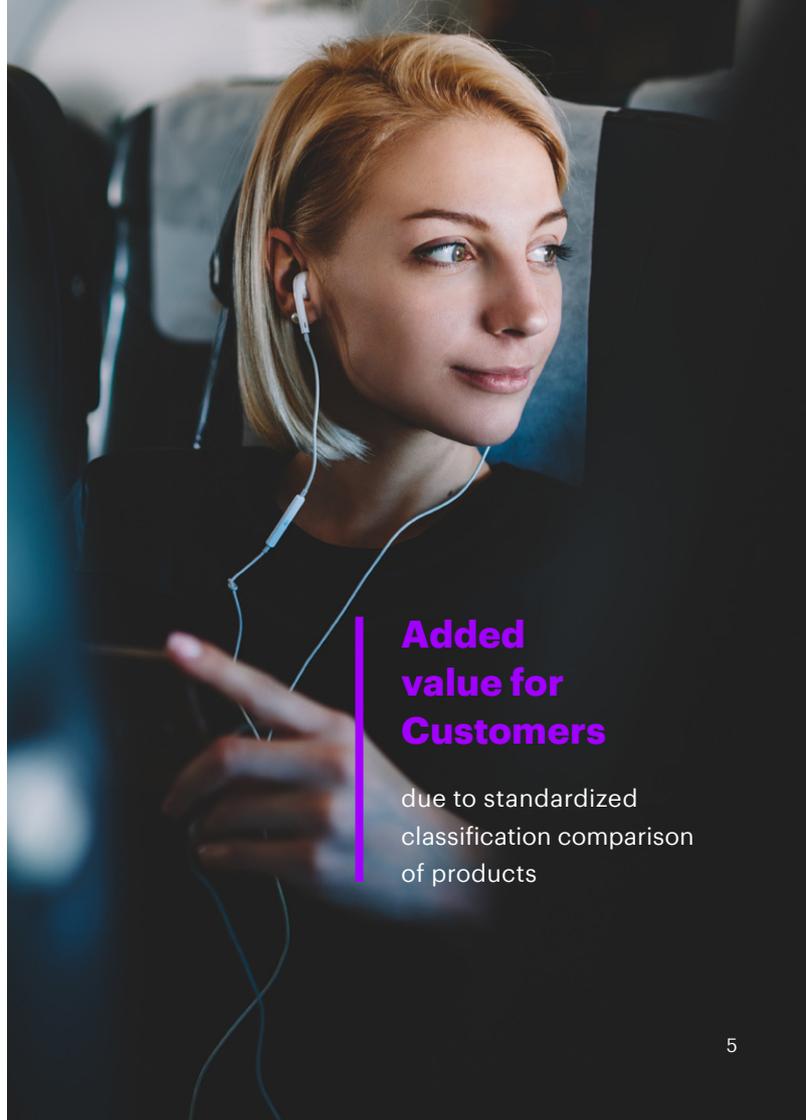Source: https://www.faa.gov/hazmat/resources/lithium_batteries/incidents

Overview of UL 5800 classes

Standard for safety—Battery Fire & Smoke Containment Product

Many products are already on the market, but the quality and functionality are not comparable and not transparent for customers.

- UL Standard to compare and to categorize battery fire containment products Standard was published in December of 2020
- Members of the Committee: Airlines from the US and Canada, Boeing, and FAA representatives

Added value for Customers

due to standardized classification comparison of products

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Overview of UL 5800 classes

Standard for safety—Battery Fire & Smoke Containment Product

UL Fire Classes	Class 1	Class 2	Class 3	Class 4
Representative capacity (Wh)	≤ 60	≤ 100	≤ 160	≤ 300
Number of cells (18650 format, 3300 mAh)	5	9	14	25
Examples for PEDs	Laptop, mobile phone, e-cigarettes	Large power banks and extra long-life workstation batteries	Up to professional camera battery	Batteries of mobility chair

Performance Level 1: all visible smoke is confined within the containment product

Performance Level 2: no more than 5m² of total smoke is released from the containment product

160Wh battery pack on thermal runaway, lowered into water

Example of a Lithium-ion Fire

The current procedures recommended by aviation authorities in handling the thermal runaway scenario.

Risk of fire and smoke in the cabin, flight-safety not under control

The fire cannot be extinguished with water. Even when fully submerged, the fire keeps burning and smoke is released.

Our solution — The Accenture PED Safety Bag

Fire and smoke contained, flight-safety ensured

It contains the heat and smoke and allows for flight continuity.

160Wh battery pack on thermal runaway, packed into PED Safety Bag

Technical features and certifications

Technical features
- UL 5800 class 2 (100Wh)
- UL 5800 class 3 (160Wh)
- Performance level 1 compliant and qualified
- Fireproof up to 1200°C
- Explosion proof
- Total smoke and invisible gas containment
- Class 2: large enough for a 13-inch laptop
- Class 3: large enough for large power banks and power tool batteries
- Small enough to be able to store at standard stowage locations without additional fixation

Qualification and certification pending
- DO160
- Fireworthiness (CS/FAR25.853)

About Accenture

Accenture is a leading global professional services company that helps the world's leading businesses, governments and other organizations build their digital core, optimize their operations, accelerate revenue growth and enhance citizen services—creating tangible value at speed and scale. We are a talent and innovation led company with 750,000 people serving clients in more than 120 countries. Technology is at the core of change today, and we are one of the world's leaders in helping drive that change, with strong ecosystem relationships. We combine our strength in technology with unmatched industry experience, functional expertise and global delivery capability. We are uniquely able to deliver tangible outcomes because of our broad range of services, solutions and assets across Strategy & Consulting, Technology, Operations, Industry X and Accenture Song. These capabilities, together with our culture of shared success and commitment to creating 360° value, enable us to help our clients succeed and build trusted, lasting relationships. We measure our success by the 360° value we create for our clients, each other, our shareholders, partners and communities. **Visit us at accenture.com.**

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