

Most lithium batteries pose a very serious risk to ship as cargo on aircraft. Safer lithium batteries are available, but currently still get classified the same as the most dangerous types – either lithium metal or lithium ion. The purpose of this testing is to collect data to create a new risk-based classification system and create the test methods that will be used to determine the classification. This involved testing various lithium batteries in two separate ways. The first test was for a single cell in a 21.7L pressure vessel to measure the volume of gas emitted from a thermal runaway event. The second was a battery propagation test where 6 cells were placed in a line in an insulated box, the first cell was put into thermal runaway, and it was determined if the thermal runaway would propagate down the line. Both tests could determine flammability as well. Testing is still in progress, but this presentation will summarize the results obtained up to this point.