More and more Lithium ion batteries are being used in products today and just like any material, if we understand how to use it safely, it should not pose any problems. Many times however manufacturers do not do a good job of educating people of the risks with using certain materials, especially when it comes to consumer products. This can be a problem when we go from using items like laptops that commonly have 6 lithium cells, to 7000 lithium ion cells to run an electric car. The risk has changed significantly when it comes to the fire this may cause. If an EV catches on fire in your garage, you most likely do not have a way to deal with a car sized 3632° F fire.

Should I really worry about my battery catching on fire? If your battery stays intact, and does not allow moisture to get inside, or as long as there is not an issue with overcharging where the temperature runs away, you should be fine. The issue is that lithium and water don’t like each other. In fact, in its pure form, water causes lithium to react, sometimes violently, creating sparks and lots of heat, as well as hydrogen gas. Lithium Ion batters are a little different than the pure form of lithium, in that they are filled with a lithium compound, and not pure lithium. Because of this, the material in many batteries are not quite as active with water. But when you have 7000 cells in one place, if one catches on fire, a chain reaction can occur that you cannot control. Also fighting that fire with water, may not be the best solution when water can cause it to react more.

This can be the same for industry. Lithium ion batteries are being used in everything from pumps and instruments, to cars and equipment, computer servers, and so many more products. Even your wireless mouse may have lithium ion batteries. If you just throw that away in the trash, not only are you potentially violating waste regulations, DOT shipping regulations, and you may also be creating a fire hazard for the waste removal truck, and the landfill that it goes to. Recently the issue with shipping lithium batteries for recycle or waste has gotten out of hand.

The Pipeline Hazardous Materials and Safety Administration (PHMSA), which is the HazMat division of the DOT, issued a safety advisory on the dangers to help people out. If you would like to educate yourself and others at your company, you can go here to read it yourself ([link](https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Final-05-16-Lithium-Battery-Recycling-Safety-Advisory.pdf)). iSi also teaches the proper way to recycle, dispose, and ship lithium batteries, and you can sing up for classes here….