

## Hazardous Material Storage and Shipment



Even if everyone in your plant has worked diligently to manufacture materials safely, you still aren't finished with process safety. How do you store the products, byproducts, and hazardous wastes that have been produced? How do you safely transport them to customers or waste disposal facilities? Things can still go wrong. The pictures show several examples:

**Photo 1** – A drum of hazardous waste stored in a warehouse was contaminated with an incompatible material, which reacted with the waste. The drum exploded, went through the roof (arrow), and landed on top of the warehouse.

**Photo 2** – A leaking ISO container filled with flammable material caught fire while in transit on the road.

**Photo 3** – A reactive monomer was put in a railroad tank car with the wrong kind of lining, was contaminated by iron from the tank car, and polymerized, resulting in a tank car explosion.

**Photo 4** – Improperly packaged used lithium batteries caught fire while being transported to a disposal facility.



## What Can You Do?

- Make sure that all containers, from small sample jars all the way up to railroad tank cars and other large vessels, are clearly labeled so that everybody knows what is in them.
- Label laboratory and plant waste containers as to what can and *cannot* be discarded in the same container.
- Do not allow packaged wastes to be stored for extended periods of time at your site.
- When preparing materials for shipment, make sure that you understand all of the requirements for safely shipping those materials, including proper containers, packaging, labeling, shipping documentation and any other requirements.
- Inspect containers *before* filling them with hazardous materials. Look for potential leak points.
- Know the requirements for safe storage of materials in warehouses or other storage areas, and follow them.
- Follow your plant's procedures for receiving hazardous materials, including shipping paperwork and/or container labeling, and for handling a damaged or leaking container.
- If you observe a damaged container anywhere in your plant in the course of your work, immediately report it so corrective action can be taken.

**Store and ship hazardous materials safely**

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