

Do you have storage pallets that look like this?

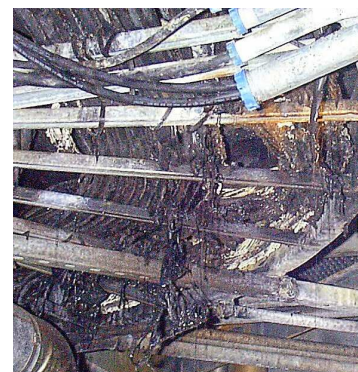
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Small charges for several batch processes were transferred into small containers and placed on a pallet near the reactors so they would be easily available when needed. The picture on the right shows a re-creation of the raw material pallet.

There was a fire in the manufacturing building which started on or near the pallet. The fire was extinguished by the building sprinkler system and there were no injuries. However, the fire caused extensive damage to electrical power, control and instrumentation wiring, and the plant was shut down for a long time while the damage was repaired. The picture on the left below shows the actual pallet after the fire, and the picture on the right shows some of the damaged cable and wiring.



The investigation revealed that some of the materials in the containers were incompatible and, over time, chemicals had leaked from damaged containers, overfilled containers, or from spills on the outside of containers. Some of this material fell through the open grate floor into a cable tray below the floor. It was difficult to see the spilled material in the cable tray, or to clean it up, and eventually some of the spilled materials reacted, got hot, and burst into flame.



Did you know?

- Many chemicals are incompatible with each other, and can cause fires or toxic fumes when they react.
- When incompatible materials react, they may get hot enough to ignite and start a fire.
- Spilled incompatible materials may not react immediately – the reaction might start slowly and only get hot enough to burst into flame after some time.
- Good housekeeping is not just about appearance – spilled chemicals can cause fire and health hazards.

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What can you do?

- Know about the compatibility of chemicals in your plant, and follow your plant's procedures for keeping incompatible materials apart in storage and use. Many plants use a chemical compatibility chart to summarize this information.
- Inspect all chemical containers regularly and ensure that they are properly labeled. Replace any containers which are damaged or leaking.
- Clean up all spills of materials immediately. Don't let spilled material accumulate, waiting to contact other materials in the future.
- Fill and empty chemical containers in approved locations where this can be done safely.
- Do not store chemical containers near fire exits, safety showers or eye wash stations, near electrical boxes and cable trays, or other important equipment.

If you don't keep it clean, who will?