Spontaneous Combustion: A Hidden Risk in Hospitality

Restaurants and bars typically use rags and towels to clean up cooking oil and grease residues and spills. Grease and oil are combustible materials, which means they easily ignite when introduced to a heat source. In addition, the fabric fibers trap grease and oil residue. Over time, these combustible compounds accumulate in the rags, creating an opportunity for spontaneous combustion.

Spontaneous combustion of soiled rags and linens is a result of a chemical reaction within the material and can even occur without the addition of an external heat source.

Standard consumer washers and dryers are not designed to launder grease- or oil-laden materials. On top of that, consumer detergents and chemicals may not be strong enough to remove the grease or oils entirely. A study done by the Consumer Product Safety Commission found that towels containing as little as three percent residue of vegetable cooking oil after conventional laundering practices could still cause spontaneous combustion.

Implementing and following the proper steps in caring for greasy rags and towels greatly decrease the likelihood of spontaneous combustion. While the best approach is to contract with an outside vendor that specializes in cleaning and disposal of grease filled, oily rags, there are steps you can take to minimize the risk if you launder the materials yourself.

What is Spontaneous Combustion?

Spontaneous combustion occurs when a material **ignites without an external flame or spark**, typically due to **heat buildup from internal chemical reactions**. In hospitality settings, this can happen in laundry rooms, kitchens, and storage areas.

Common Causes in Hospitality

+ **Oily or Greasy Linens**
  - Towels and rags soaked with cooking oils can heat up during oxidation
+ **Improper Storage of Linens**
  - Piling warm, damp laundry in confined spaces traps heat
+ **Chemical Reactions**
  - Cleaning agents mixed with organic materials can accelerate oxidation
+ **Poor Ventilation**
  - Lack of airflow increases heat retention

High-Risk Areas

+ Laundry rooms
+ Kitchens
+ Linen storage closets
+ Trash collection areas

Warning Signs

+ Unusual heat or odor from stored linens
+ Discoloration or smoking fabrics
+ Warm spots in laundry piles

Prevention Tips

CLEANING

+ Only use commercial-grade appliances designed to clean grease-laden linens and rags. If you're unsure, check the owner's manual. No owner's manual? Don't use the washer.
+ Pre-soak towels and rags to remove as much of the oily debris as possible.
+ Use detergents and chemicals specially designed to clean these fabrics and the grease and oil from them.
+ Remove materials from the dryer as soon as the cycle is done. Do not leave materials in the dryer for long periods of time or overnight.

STORING CLEAN RAGS

+ Store clean rags separate from dirty materials.
+ Even clean linens and rags have some amount of grease and oil residue, so keep them in a metal cabinet or locker.
+ As a precaution, even clean linens should be stored in a container with a closing lid.

Emergency Response

If you suspect spontaneous combustion:

+ Remove heat source
+ Spread out materials
+ Call emergency services immediately

PROTECT YOUR PROPERTY, STAFF, AND GUESTS.

AWARENESS IS THE FIRST STEP TO PREVENTION!

Prevention of Spontaneous Combustion

Solution: UL Approved Self-Closing Fireproof Container or Disposable Towels

Using a **self-closing fireproof container** offers several important benefits, especially in environments where safety and compliance are critical.

Here are the key advantages:

ENHANCED FIRE SAFETY

- The self-closing lid helps prevent flames from escaping if a fire starts inside the container.
- It minimizes oxygen flow, reducing the chance of combustion spreading.

COMPLIANCE WITH SAFETY REGULATIONS

- Many workplace safety standards (like OSHA and NFPA) require self-closing mechanisms for flammable storage.
- Ensures adherence to fire codes and insurance requirements.