

## Idle Pallets Management

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In manufacturing or storage facilities, presence of idle pallets at any given time can be significant and could present a serious fire hazard. A stack of idle pallets creates an almost perfect geometrical condition for an intense fire with ample air supply to many surfaces, allowing the fire to grow rapidly.

We at Liberty General Insurance understand the importance of rectifying the malpractices followed for idle pallets storage and intend to suggest some safety measures to augment the same.



### Overview:

Pallets are flat platforms made of wood, plastic or composite materials that are designed to provide access for forklifts and other material handling equipment. Pallets serve an important function allowing goods to be moved, stacked, and stored with ease and speed. Once a pallet has been relieved of its product load, it becomes an “idle pallet” until it is needed again.

Idle wood and plastic pallets are a familiar sight in most facilities, but many people are not aware of the serious exposure to large loss posed by these. Improperly stored or improperly protected pallets add a significant fire load to any occupancy and can lead to a catastrophic loss in the event of a fire.

Hazards posed by plastic pallets are certainly known, but the fire challenge posed by wood pallets should not be underestimated. Wood pallets can become dry and splintered during use, allowing them to be easily ignited.



## Challenging Fire Hazards of Pallets

The extremely high heat release associated with a fire in a stack of pallets creates a high-velocity plume of fire gases. Sprinkler systems designed for ordinary hazards may be inadequate in combating pallet fires because the rising gases in the plume carry much of the sprinkler water away from the fire, and the high temperatures generated in the intensely burning array evaporate much of the water that does penetrate the plume. With little water reaching the seat of the fire to cool and extinguish the burning material, the fire continues to grow, releasing greater quantities of heat and causing more and more sprinklers to open, until eventually the sprinkler system is overpowered.



## Prevention Measures:

### Inventory:

- It is important to monitor the number of pallets and storage arrangements on an ongoing basis. This should be part of the regular fire safety inspection.
- Idle pallet storage should be limited to the minimum needed to meet production demands.



### Location:

- Store idle pallets in an external secured location, where sufficient clearances from exposures are maintained.
- They should also be stored in a separate area away from flammables and compressed gases. And it must be separated from other combustible storage and buildings by 50 feet.
- Outside pallet storage should be located away from any air intakes, ducts or building openings that could allow smoke from burning pallets to enter the building.



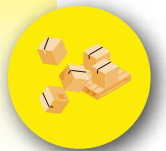
### Storage Practices:

- Avoid stacking pallets on edge. Idle pallets should always be stored flat and in orderly piles to limit the flue space in the pallet pile.
- Interior storage of wood idle pallets should be limited to four stacks stored six feet high.
- Whether you are storing wood or plastic idle pallets inside the building, no other commodity should be stored within 25 feet of the pallets.
- Pallets can become contaminated with chemicals spilled on them during the shipping process. If there are any spills on it, either oil, food or unknown substances, it should not be used again unless its cleaned or sanitized appropriately.



### Others:

- If you must store pallets inside the building, they should not be stored in warehouse racking unless your sprinkler system was designed specifically for this type of storage.
- Don't reuse damaged pallets. Also, never stack mixed sizes of pallets.
- Storage should not block, if possible it should be far from emergency egress route.



## Trivia

### Did you ever wonder why wood pallets are heat treated?

Asian Long horned Beetle, a common pest found in untreated wooden pallets and crates has totally devastated large populations of ash trees. So in March of 2002, The International Plant Protection Convention (IPPC) decided that all solid wood packaging must be heat-treated or fumigated before they can be imported into any of IPPC's 182 member countries. The wooden pallets are heated at 56°C for at least 30 minutes to comply



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