

# LOSS LESSONS

## VOLUME 3

ALLIANZ GLOBAL CORPORATE & SPECIALTY®

# OUTDOOR PALLET STORAGE: A BLAZING INFERNO

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**Occupancy:**

Metal packaging  
manufacturing

**Property Damages:**

€ 1,000,000

**Business Interruption:**

None

## CIRCUMSTANCES

During the night of the 4<sup>th</sup> of May, at 1.15 AM, the outdoor storage of stockpiled idle wooden pallets of a metal packaging manufacturer was completely destroyed by fire. Approximately 30,000 pallets were lost, in spite of the action of the plant's Emergency Response Team and Fire Department. This action has, however, reduced the damage to the storage building located 10 m away from the pallets, and has also allowed to keep all the other buildings safe from the fire.

Nobody was injured during this fire.

## EXTENT OF THE DAMAGE

- 30,000 idle pallets destroyed
- Metal racks and frames stored in the vicinity either damaged or destroyed
- Two trailers for racks and pallets parked nearby destroyed
- Storage building damaged (partial replacement of claddings and access doors, partial re-roofing, replacement of plastic skylights and rainwater drains, cleaning of the soot deposits)

## CAUSE OF THE LOSS

Arson is the most credible hypothesis: investigations carried out after the loss revealed that the part of the fence located near the idle pallets storage had been cut.

## WHAT HAS WORSENERED THE LOSS

- The lack of clear distance between the outside idle pallets storage, the metal racks and frames storage and the trailers parking area, leading to their destruction due to heat exposure
- The insufficient clear distance (10 m) between the idle pallets storage and the storage building, leading to damage to this building due to heat exposure, in spite of the Fire Department reaction. This distance was too low, regarding the high quantity of pallets and their storage arrangement
- The lack of aisles between each block storage of pallets which could have prevented the fire from jumping from a block storage to the next one

# WHAT HAS LIMITED THE LOSS

## PROPERTY DAMAGE

- Idle pallets storage not located along the buildings
- Favorable weather conditions (no wind)
- Determined and organized Emergency Response Team and Fire Department reaction. Each production shift in the plant is provided with regularly trained first and second level emergency crews, with definite duties

## BUSINESS INTERRUPTION

Production was put on hold only very shortly, while it was checked that the buildings were fully safe from the fire. No business interruption was sustained by the plant and the loss of the whole storage of pallets did not lead to direct consequences for production and products deliveries. The plant has been quickly released from all access restrictions and local transportation quickly resumed.

## COMMENTS AND LEARNINGS

The frequency and severity of this type of event, in plants having such outside idle pallets storage, can be limited by the following rules:

### Emergency organization

The key factors of a good emergency organization are:

- A fully documented response plan, detailing each duty and designating the people in charge of them. The plan must cover both working and idle periods. First and second level emergency crew members should be as many as needed, with alternates identified in each shift
- A document should be established for each second level emergency crew duty (at least a man in-charge, someone in charge of the external assistance guidance, someone in charge of the energy supplies shutdown, 2 team members in charge of fire-fighting with the available hoses). In plants which are equipped with automatic sprinkler protection, one team member should be in charge of valve supervision and one for pump operation supervision
- Regular training (every 3 months) of the second level emergency crew members, with drills on real fires

### General loss prevention rules regarding idle pallets storage

- To minimize arson exposure, the idle pallets storage areas should be kept away from the plant's outside fence (distance should be determined upon applicable local regulation and Fire Department recommendations with a minimum distance of 3 m if there is no exposure from/to another building). All outside areas should be permanently lit during the night. The installation of a video supervision system is also a good means of prevention
- A fire involving idle pallets is very challenging due to its quick spread and its intensity. It is therefore critical to maintain an adequate clear distance between the pallets and the surrounding buildings. The following table, reminding these minimum clear distances, is only applicable for idle wooden pallets. Outside storage of plastic pallets requires even higher distances



↑ Building damaged by heat exposure



↑ Destroyed and damaged racks and frames

Type of building wall exposed		Minimum safe clear distance between the building and the outdoor wooden pallets storage		
Wall material	Openings	< 50 pallets	50 to 200 pallets	> 200 pallets
Masonry	None	1 m	1 m	1 m
	1h rated fire door	1 m	3 m	6 m
	Wired glass/45 min rated fire door	3 m	6 m	15 m
Non combustible (metal cladding)	None	3 m	6 m	15 m
Wood/combustible construction	None	6 m	9 m	27 m
Any	Plain glass			

## NOTES

- Any construction element of a rated fire resistance less than the overall wall construction (for example, steel frame in masonry walls, or sheet metal clad building with bituminous felt on steel deck) should be rated as such in this table.
- When pallets are stored close to a building (1 to 6 m), the height of storage should be restricted to prevent burning pallets from falling onto the building. The required 1 m minimum separation distance in the table allows the access between the building and the pallets piles.
- The minimum safe clear distance between two piles of pallets depends upon the pile size. This distance is 2,5 m for piles with less than 50 pallets, 5 m for piles with 50 to 200 pallets, and 15 m for piles with more than 200 pallets. This is to allow a more efficient emergency response possibility per pile as well as the proper implementation of the safe clear distances given in the table.

## QUESTIONS OR COMMENTS?

### Nicolas LOCHET

Regional Technical Manager  
Allianz Risk Consulting  
+33 607 798 412  
[nicolas.lochet@allianz.com](mailto:nicolas.lochet@allianz.com)

[www.agcs.allianz.com](http://www.agcs.allianz.com)

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