Material Storage: Pallets, Racks, Overlots and Falling Objects Stats and Facts

FACTS

- **Rack Overload Is a Structural Failure Waiting to Happen:** Pallet racks are engineered for specific load limits. Exceeding those limits can cause uprights to buckle and entire rack sections to collapse without warning.
- **Forklift Impacts Damage More Than They Show:** A forklift strike on a rack upright may not cause immediate collapse, but it compromises structural integrity invisibly. A hit rack that is not inspected or repaired is a hazard every time it is loaded.
- **Overlotting Creates Falling Object Zones:** Stacking materials above designated height limits or beyond a pallet's footprint creates an unstable overhang. When that load shifts or is disturbed by nearby equipment, items fall into working aisles below.
- **Unsecured Pallets Are Projectiles:** A damaged or overloaded pallet can fail during movement or storage. When a pallet gives way at height, the materials it carries become uncontrolled projectiles in a fraction of a second.
- **Aisle Creep Blocks Emergency Routes:** Materials placed temporarily in aisles rarely stay temporary. Gradual encroachment into walkways restricts movement, reduces visibility, and blocks evacuation routes.
- **Head Injuries from Falling Objects Are Often Fatal:** A single item falling from rack height can generate enough force to cause a fatal head injury, even when a worker below is wearing a hard hat.
- **Rack Inspection Is Not Optional:** Damaged rack components that are not tagged and taken out of service continue to bear load. An unrepaired upright under full load is a

collapse event waiting for a trigger.

STATS

- The warehousing and transportation sector recorded an injury and illness rate of 4.8 cases per 100 full-time workers in 2022 – nearly double the private industry average of 2.7 – according to the Bureau of Labor Statistics.
- Non-fatal injuries in U.S. warehousing and transportation cost employers more than $84 million per week – over $4 billion annually – according to the National Safety Council.
- Struck by falling or moving objects accounts for 10 percent of non-fatal injuries in the transport and storage sector, ranking among the most common incident types.
- Approximately 90 percent of rack failures are attributed to forklift impacts, according to rack safety research.
- From 2022 to 2023, OSHA recorded 205 accidents involving forklifts, with 128 resulting in fatalities.