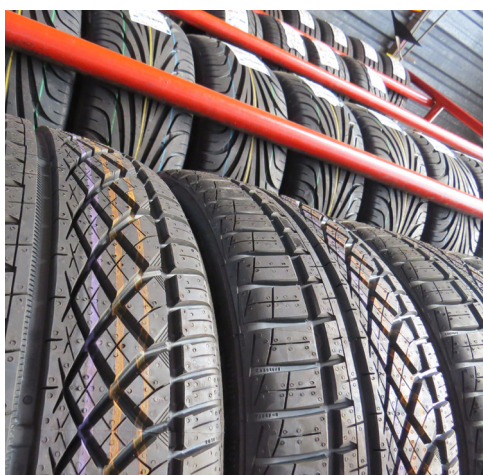


Insurers are often asked to cover risks involving rubber tyre storage in different forms with varying levels of storage arrangements in place. Generally, tyre storage presents a severe fire hazard and can result in significant losses to property assets, post loss clean-up /removal of debris costs and potential business interruption exposures, not to mention possible liability implications.

Tyres are approximately 60% hydrocarbon, and have a much higher calorific value than fuel sources such as wood, coke and brown coal. Tyres burn rapidly, emitting intense heat and large quantities of dense smoke that hamper fire-fighting. Fire fighting is difficult as rubber repels water and fire can fully develop generating very high energy release rates. The rubber compound degrades and forms hot liquid which can accumulate creating pool fires, exacerbating the fire development. The fire releases a dark, thick smoke that contains volatile toxic gases including carbon monoxide, sulphur dioxide, and products of butadiene and styrene which can emanate for long periods into the atmosphere.



Inception hazards:

Heat processing in various forms has potential for fire where an ignition source is in close proximity to tyre storage, whether in a building or involving accumulated yard storage. Uncontrolled hot works such as welding or metal grinding or other human element factors such as smoking present an increased fire risk. Other commodity storage including flammable liquids, combustible oils, etc mixed with tyres has the potential for a rapid and sustained fire event. Arson attack is also a significant risk factor, particularly involving rubber tyre storage close to property assets. There is a high risk of fire spread potential in these circumstances. The greater the volume of storage, the greater the fire risk and increasingly greater problems presented with fire fighting.

Fire-fighting:

Insurers have concerns over effective fire-fighting capabilities to sites with tyre storage facilities. A higher demand for water flow and pressure is required in fighting tyre fires than that of most other combustible materials. Adequacy of effective fire-fighting equipment supported by unlimited water supply is considered critical. Automatic fire suppression systems matched to the tyre storage levels within buildings are also considered effective and therefore appropriate over such warehousing risks. Without effective fire fighting provisions, a fire event may take some time to control and eventually extinguish before site clean-up can occur.

Depending upon the size of the tyre storage/ fire development, this could take several days or possibly much longer. Anticipated high site clean-up costs will include an overall site appraisal of hazards (including environmental), neutralize toxic chemicals and remove debris to an appropriate disposal site. Post fire clean-up costs are likely to be significant.

Management controls:

The human element discipline is considered an important factor for loss mitigation of rubber tyre storage risks. In well managed operations, continuing controls over storage management and eliminating potential exposures to risk is a key factor for insurance risk acceptability. The ongoing concern however is with the poorly managed operations of storage sites, particularly if there is little or no consideration given to understanding the risks and putting in place controls to mitigate the potential fire hazard presented by rubber tyre storage.

For more information:
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