

ALLIANZ COMMERCIAL

Earthquake checklist

Earthquakes are one of nature's most severe natural hazards. The amount of ground movement that occurs

The United States Geological Survey (USGS) estimates that there are 500,000 detectable earthquakes in the world each year and 100 of them cause damage. While earthquakes cannot be accurately predicted or prevented, the potential damage resulting from an earthquake can be mitigated by understanding the hazard and by planning carefully. It is important to note that most building codes are intended to prevent the collapse or failure of a building for the primary purpose of reducing loss of life. These provisions will not necessarily prevent damage to a building or allow for a quick and simple repair.

Damage from an earthquake can range anywhere from a minor inconvenience to a major catastrophe. Buildings can suffer both structural and non-structural damage.

Infrastructure damage can include broken automatic fire sprinkler systems and flammable gas piping, the shifting of major production and facility support equipment, and the

Pre-earthquake planning

The key to minimizing earthquake damage is adequate preparation before the event.

If your site is subject to earthquakes, the following should be completed:

Develop a comprehensive, written earthquake emergency plan to mitigate the exposures.

The plan should include:

- Assigning emergency organization roles and responsibilities.

- Providing training at least annually.

- Assembling emergency supplies and equipment, such as tools, fire extinguishers, portable electric generators, emergency lighting, medical supplies, etc.

- Planning for salvage and recovery, including maintaining a list of key vendors, contractors, and salvage services.

- A business continuity plan for restoring operations after the event.

The plan should be reviewed at least annually and updated as needed.

Verify equipment, especially tall, slender objects, is properly braced and/or anchored to prevent movement, such as:

- Production and process equipment.

- Flammable liquid or gas piping.

- Fire protection systems, such as sprinkler piping, water tanks, fire pumps, drivers and controllers, etc.

- Utility equipment, such as boilers, HVAC equipment, cooling towers, air compressors, generators, transformers, switchgear, etc.

- Storage tanks, silos and bins.

- Storage racks and shelving.

- Computer server equipment racks.

- Any suspended equipment, such as space heaters, suspended ceilings, piping, electrical bus ducts, etc.

- Tall office furnishings, such as filing cabinets, bookcases, etc.

Production equipment anchored to the floor.

Sprinkler riser with sway bracing.

Computer server racks anchored to the floor.

Flammable liquid tank strapped to wall.

Seismic shutoff valve for natural gas line.

Install seismic shutoff valves on all flammable liquid and gas piping systems. For main natural gas and propane service lines, install the seismic shutoff valve between the utility meter and where the piping enters each building

Provide flexible gas connections between gas-fired equipment and piping.

