

Earthquake Information 地震須知

I. General Earthquake Information

Taiwan is located on the circum-Pacific seismic belt where more than 70% of all earthquakes in the world take place. The Eurasian plate and Philippine Sea plate come into contact in the Taiwan region, of which Taiwan itself is a typical continental margin island created by plate collision. Due to the convergence of the Eurasian plate and Philippine Sea plate in eastern Taiwan, earthquakes are more frequent on the eastern side and the number of earthquakes that take place here is also a lot higher than in other areas. Earthquakes in central and western Taiwan are less frequent than those in the east and their scales are also slightly smaller than those occurring on the east side. However, most of the earthquakes that take place in the center and the west are shallow focus earthquakes, and the weathering of the earth's surface as well as a sedimentary environment would make the responses of earthquake waves on the earth surface stronger in intensity, added to the fact that western Taiwan has been economically developed for a longer period, and that the population there is much denser; as a result, the overall damage and casualties caused by earthquakes in the west are always severer.

II. Taiwan seismic intensity scale

Felt earthquakes that occur in Taiwan are solely issued by the Central Weather Bureau, Ministry of Transportation and Communications. The Richter Scale (ML) is used to measure and report earthquake magnitude.

Seismic intensity scale		Range of acceleration of ground motion	How people feel	Indoor situation	Outdoor situation
0	Instrumental	Lower than 0.8 gals.	Imperceptible by people.		

1	Very feeble	Between 0.8 and 2.5 gals.	People at rest can feel feeble vibrations.		
2	Feeble	Between 2.5 and 8.0 gals.	Felt by most people; some sleeping people are awakened.	Hanging objects such as lamps swing slightly.	Standing cars rock slightly; as is caused by the vibrations of a passing truck, but only for a short while.
3	Slight	Between 8 and 25 gals	Almost everyone can feel the shaking of the earth; some are frightened.	Buildings shake; dishes, windows and doors rattle; suspending objects swing.	Standing cars rock noticeably; power lines swing slightly.
4	Moderate	Between 25 and 80 gals	Many are frightened; some seek hiding places; nearly all sleeping people awakened.	Buildings shake violently; unstable objects overturn; heavy furniture moves. May cause slight damage.	Car drivers feel slight tremor; power lines swing noticeably; pedestrians can feel the tremor.

5	Strong	Between 80 and 250 gals	Most people terrified and panicked.	Some walls crack; heavy furniture might overturn.	Car drivers noticeably sense earthquake; some signs, arches and chimneys fall.
6	Disastrous	Between 250 and 400 gals.	Difficult to keep standing.	Some buildings damaged; heavy furniture overturns; doors and windowpanes distort and deform.	Car drivers find it difficult to drive; Liquefaction occurs.
7	Very disastrous	Greater than 400 gals.	Impossible to move voluntarily due to violent shaking.	Some buildings considerably damaged or collapse; almost all furniture moves to a large extent or falls.	Landslides and fault rupture occur; rail bent; underground pipes break.

Note: 1 gal = 1cm/sec²

III. Emergency response information

A. Before an earthquake

- Prepare an emergency first aid kit and fire extinguisher at home and

inform your family members where they are located and how to use them.

- Learn how to turn on and shut off gas, water and electricity.
- Keep hanging objects firmly secured. Cabinet doors ought to be locked.
- Do not put heavy objects on high shelves. Secure heavy furnishings.
- Know the safe spots in your residence.

B. During an earthquake

Indoor:

- Keep calm and immediately shut off electricity, gas and water.
- Open the entrance door and grab any cushion at hand to protect the head. Quickly duck under a sturdy piece of furniture or table, or stand by the central wall of the building.
- Stay away from windows in case the glass is broken by the tremor.
- DO NOT rush outdoors in a panic.

Outdoor:

- Stand in a clear area or under building arcades. Do not rush indoors in a panic.
- Protect yourself from falling objects such as signs or potted plants.
- Stay away from buildings still under construction, electricity poles, walls, fences and unsecured automatic vending machines.
- If you're on an overhead walkway or inside an underground walkway, get away calmly and quickly.
- If you're driving, do not pull the emergency brake, instead reduce speed gradually and pull over to the side of the road and stop. Duck under building arcades nearby.
- If you're driving on a highway or viaduct, drive carefully away.
- If you're in the suburbs, avoid cliffs, riversides, and shores, and move to a clear area.

Schools:

- Duck under a desk with your back to the window and protect your

head with your backpack.

- Do not rush out of a classroom, and avoid going up or down the stairs in a panic.
- If you're in the playground, keep away from buildings.
- If you're in a moving school bus, remain seated and do not move until the bus fully stops.

Offices and public places:

- Protect yourself from falling objects (such as lamps) from the ceiling.
- If you're in an office, duck under a desk or a sturdy piece of furniture, or stand by a wall support.
- In public places, choose an exit carefully and avoid being pushed by the crowd.
- Do not try to rush out of a building. Do not use elevators.

C. After an earthquake

- Check if people near you are hurt and provide emergency aid.
- Check for water, electricity and gas leaks. Gently open the doors and windows upon finding gas leaks, immediately get away and inform related authorities.
- Turn on your radio for emergency instructions and disaster reports.
- Check your building for damage and quickly leave a damaged building. During evacuation, take the stairs.
- Try to wear leather shoes and boots to avoid from being hurt by broken window glass or other sharp objects.
- Keep the streets clear for emergency vehicles and evacuate on foot.
- Be prepared for aftershocks and cooperate with emergency plan officials for instructions to evacuate.
- Avoid beaches and ports in case tsunami should happen.
- Do not enter disaster areas without permission. Be careful to watch for looters or thieves.

IV. Internet Resources

Central Weather Bureau: <http://www.cwb.gov.tw/>

National Fire Agency, Ministry of the Interior: <http://www.nfa.gov.tw/>

Central Geological Survey, Ministry of Economic Affairs:
<http://www.moeacgs.gov.tw/>

National Center for Research on Earthquake Engineering:
<http://www.ncree.gov.tw/>

National Earthquake Information Center, U.S.: <http://neic.usgs.gov/>