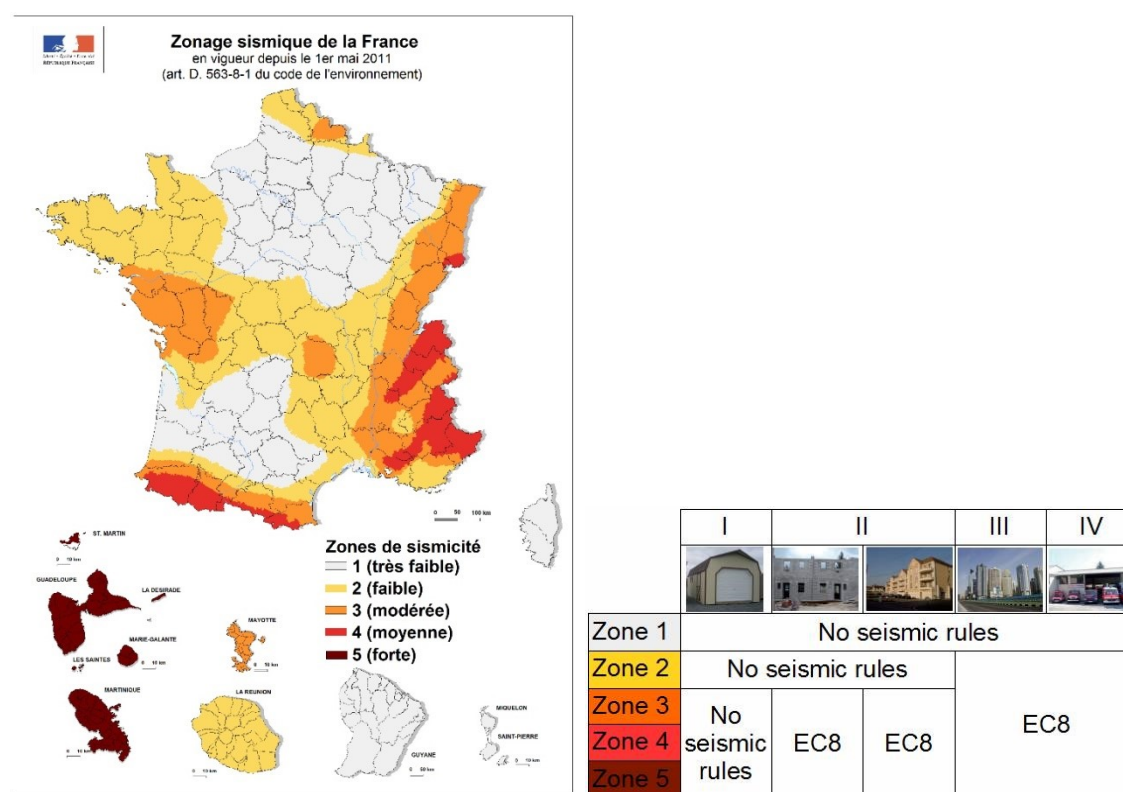


8.1 Ministerial Order of 4th October 2010 on Earthquakes (France)

| OECD GP Activity | UN SF Activity | UN SD Goals / Targets |
|--|--|---|
| 8. Natech risk in regulations, standards, codes and guidance | 3. Investing in disaster risk reduction for resilience | 3.D Strengthen the capacity of all countries ... for early warning, risk reduction and management of national and global health risks |

Classification according to OECD Guiding Principles, UN Sendai Framework Priorities/Activities, and UN SDGs and Targets

Figure 1: Seismic risk zones in France based on the decree N°563-8-1 of the environmental law



Source: © MTES

| Short Facts: | Natural Hazard(s) Considered: |
|--|--|
| <p>Governance approach: Regulation</p> <p>Source: French Ministry for the Ecological and Inclusive Transition</p> <p>Entry into force: 2018</p> <p>Targeted Stakeholders: Operators of establishments holding chemicals</p> <p>Scope of applicability: National, installations, constructions</p> | <ul style="list-style-type: none"> Earthquakes <p>Climate change: Not relevant</p> |

Description

In France, establishments of special risk to polluting the environment with chemicals ('Installations classé pour la protection de l'environnement' (ICPE)) are regulated under a law from 4 October 2010. The regulation is based on a national seismic hazard map, where the level of seismic risk is subdivided into five classes and defined by the soil properties of the region (soil acceleration relative to felsic rocks). Furthermore, buildings are distinguished in five different classes of importance, mainly depended on the number of people usually present during the day, the size of the building, the building's social importance, and their importance for the security of supply and the national safety.

The law from 4 October 2010 was last modified on 15 February 2018, following a generic study to improve the knowledge of existing structures of Seveso establishments. For that purpose, ten different groups of equipment (anchored and non-anchored vertical atmospheric vessels, vertical, horizontal and spherical vessels under pressure, cryogenic tanks, columns and chimneys, pipes, pumps and rotating equipment) were examined, mainly in the seismic zones 1 and 2. The new regulation contains three key points:

Compliance study scope

Since February 2018, establishments have to conduct a study of compliance (to check whether buildings would resist a probable earthquake event) if they are:

- existing lower-tier sites, situated in zones 4 or 5
- new lower-tier sites, situated in zone 2D*, 2E*, 3, 4 or 5
- existing upper-tier sites, situated in zone 2D*, 2E*, 3, 4 or 5
- new upper-tier sites, accounting for all seismic zones

*letters according to ground type from Eurocode 8

Local seismic level study

In some cases, the scale of the national seismic hazard map does not allow for the regulation of local special situations. For these cases, establishments can award a local study to change the seismic level they are assigned to. Local seismic level studies then have to be conducted by authorized engineering consultants.

Control plan

Since the condition of equipment is an important factor for earthquake resistance, a control of the equipment, presented in the safety report, has to take place regularly, if an earthquake event can have some effects on a place where people stay for a longer time (e.g. houses, offices, schools). Every Seveso establishment has to control their identified equipment with special attention to anchorage and fasteners.

An industrial consortium has been installed with the 'Association Francaise de Génie Parasismique', the 'Syndicat National de la Chaudronnerie, Tuyauterie et Maintenance industrielle' and the minister assigned for environmental protection to issue a common framework for industry and administration to strengthen already existing establishments in security management and to guide the conception of establishments in planning which fall under the high risk assessment.

This consortium has created the following guides:

1. A methodological guide describing the general approach of taking seismic risk into account
2. Specific technical guides, including different types of chemical storage (vertical, horizontal and cryogenic tanks), hydraulic lines, controls and instruments, seismic instruments, structure support
3. A case-study guide

Link/Contact:

<http://www.uic.fr/Activites/Securite-industrielle/Reglementation-sismique-Risque-Special#>
<http://www.planseisme.fr/ICPE-a-risque-special-1476>
http://www.planseisme.fr/IMG/pdf/plaquette_meddtl_dgaln_reglementation_parasismique_v2.pdf

Comments by the UN/OECD Natech-Steering Group:

All safety relevant parts of hazardous installations should have an earthquake-aware design and layout.

Imprint



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