

Estonia

Estonia has a regulation for structural fire safety requirements which includes several requirements and incentives to install sprinklers. A summary translation from the Rescue Service is posted in the fire safety legislation library held on this site. Buildings are classed as TP1, TP2 or TP3 depending on their degree of fire resistance, with TP1 buildings being the most fire resistant. The requirements for TP1 and TP2 depend on the height of the building.

5.8 sets out that an automated firefighting system is required in:

- *A building in which a fire compartment extends through three or more storeys, except for an escape stairwell constructed as a fire compartment or a residential building with one or two apartments*
- *A healthcare building with more than four storeys, except where the operation of a firefighting system is dangerous or disturbs the provision of vital services*
- *TP2 or TP3 buildings that exceed the limits for the number of floors, height, area or number of users (sections 1.5.1. and 1.5.2.)*
- *A building that exceeds the compartment limit area (section 3.1.2)*
- *TP2 buildings with 5-8 floors, excl. cases when the load bearing structure is at least A2-s1,d0 (this includes wooden buildings)*
- *The stairway of a TP2 building with 3–4 floors, if the inner surface is D-s2,d2*
- *A multi-storey basement*
- *KV 6 building (industrial buildings and warehouses):*
 - *fire hazard class 1, TP3, > 4000 m²*
 - *fire hazard class 1, 1 floor, TP2, > 6000 m²*
 - *fire hazard class 1, 2 floors, TP2, > 4000 m²*
 - *fire hazard class 1, 1 floor, TP1, > 12 000 m²*
 - *fire hazard class 1, 2-3 floors, TP1, > 8000 m²*
 - *fire hazard class 1, ≥4 floors, TP1, > 6000 m²*
 - *fire hazard class 2, TP3, > 1500 m²*
 - *fire hazard class 2, 1 floor, TP2, > 3000 m²*
 - *fire hazard class 2 or 3, 1 floor, TP1, > 4000 m²*
 - *fire hazard class 2 or 3, 2-3 floors, TP1, > 2000 m²*
 - *fire hazard class 2 or 3, ≥4 floors, TP1, > 1500 m²*
 - *fire hazard class 3, 1 floor, TP2, > 2000 m²*
- *KV 7 building (car parks):*
 - *part of another building, TP3, > 1000 m²*
 - *standalone, TP3, > 2000 m²*
 - *basement floor, TP1, TP2, > 3000 m²*
 - *1-2 floors, TP2, or ≤ 8 floors, TP1 > 6000 m²*
- *A lightly guarded room with a large area or high specific fire load, in which once a fire has started, it may danger the surroundings, cause large property damage or destroy articles of cultural value*

If an automated firefighting system is installed in a building in which it is not required, then the following concessions can be made:

- *Compartment area limit, but not in a KV 2 (hotel) or 3 (hospital, care home or prison) building*

- *length of the escape route, but not in a KV 2 or 3 building*
- *number of users, but not in a KV 2 or 3 building*
- *fire resistance of the load bearing structures*
- *fire resistance of the compartment structures*
- *reaction to fire of structures*
- *separation distance between buildings*

In case of applying more than two concessions, analytical proof must be performed.

1.4 defines fire hazard class 1 as a fire load below 300 MJ/m² (such as an industrial building), class 2 as a fire load above 300 MJ/m² (such as a warehouse) and class 3 where significant quantities of flammable liquids are present.

1.5.2 clarifies that the height limit is 28 m or a floor of 24 m for most buildings, except for residential buildings where it is 16 storeys. Above these thresholds sprinklers are required.

3.1.2 sets out the compartment limits for different TP classifications and building occupancies. For industrial and warehouse buildings it also considers fire hazard classes and numbers of storeys. For car parks it considers the number of storeys. Industrial buildings and warehouses are typically classed as TP2 buildings.

In summary as in many other countries, Estonia requires sprinklers in most high-rise buildings, in shopping centres and large places of assembly. The height threshold is 28 m or a floor higher than 24 m, except for residential buildings where the height threshold is 16 storeys. Sprinklers are also required in 5-8 storey wooden buildings with exposed wood, an incentive most relevant to apartment buildings. For shopping centres and places of assembly there is an area threshold for sprinklers of 2,400 m².

Sprinklers are required in hospitals and care homes higher than four storeys or with compartments larger than 800 m². Single-storey warehouses must be sprinklered if they are larger than 3,000 m² and single-storey industrial buildings if they are larger than 6,000 m². Underground car parks must be sprinklered if they are larger than 6,000 m² and above ground car parks if they are larger than 8,000 m².

Sprinklers may also be used to reduce fire resistance, increase travel distances and reduce distances between buildings but the extent of the relaxations does not appear to be codified.