

Alinel aluminium gevelbekleding Fire resistance & corrosive effect



Fire resistance & fire standards

Facade construction is generally subject to strict European fire standards (**EN 13501-1**).

It goes without saying that the materials used in the façade must be as resistant as possible to flammability, fire spread, (extreme) smoke development, melting and/or dripping because of high temperatures or fire.

In addition, this standard also stipulates that materials for facades of buildings higher than 25 meters must always comply with fire class A1 (low to no susceptibility to fire or contribution to fire spread).

Under this standard, all materials are divided into the following seven classes:

- A1: non-combustible
- A2: almost non-combustible
- B: very limited combustibility
- C: limited fire resistance
- D: normal fire resistance
- E: limited fire resistance
- F: no performance determined, unknown

These classes indicate how a material will react to fire, with A1 being the best class (non-combustible) and F being the worst class (extremely combustible or combustibility unknown).

Alinel façade cladding is made from aluminium 6060 EN573-3/T66. This type of material is not specifically classified in the EN 13501-1 fire standard as for other building materials. However, **aluminium is classified as non-combustible**, which means that it falls under **fire class A1**.

In general, aluminium can be considered non-combustible and only melts at high temperatures above +650°C. The material will therefore not contribute to the spread of fire, but it may deform and/or melt under the influence of high temperatures. It is necessary to evaluate each façade structure in its entirety, including its fire resistance and fire rating. This item must therefore be included in the overall project study for the façade.

Corrosive effect between different materials

For a complete façade construction, please refer to standard **EN 1999-1-1 (EUROCODE 9)**. This standard stipulates that every construction must comply with the requirements and recommendations set out in the standard.