

Technical information sheet

Fire-resistant greening of buildings

in accordance with
VKF guideline



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The VKF guideline serves as a guideline for the fire protection-compliant implementation of building greening. However, the directive does not contain any binding building regulations. The following summary refers exclusively to ground-based vertical greening.

Every plant can be ignited, whereby the flammability depends on the ratio of woody parts to leaf mass, the proportion of essential oils, the wood mass of the plant and the flammability of the supporting structure. Insufficiently maintained, dry or dead greenery on buildings poses an increased risk of fire. Overall, the greening of buildings requires careful planning and maintenance in order to minimize fire protection risks.

Accessibility for firefighting must not be impaired by greenery, as it can facilitate the spread of fire to neighboring buildings and obstruct escape and rescue routes.

The greening of high-rise buildings requires a special fire protection concept, which must be checked by the local fire protection authority for completeness, comprehensibility and plausibility.

Jakob Rope Systems offers customized façade greening with non-flammable wire rope structures and stainless steel components. We develop customized solutions that go beyond standard solutions and meet the specific fire protection requirements of your project. Rely on our expertise for safe, sustainable and standards-compliant greening concepts.

Recommended fire protection measures

Minimum fire protection distances:

(Only one measure required)

- 0.6 m distance between greenery and façade (Fig. 8)
- 0.5 m distance between greenery and openings (e.g. windows) (Fig. 12)
- 1 m distance between individual partial areas if the greenery extends over several storeys (Fig. 9 - 11)
- 0.5 m distance between greenery and the axis of the firewall
- 0.5 m distance from greenery to smoke and heat extraction system (SHEVS)

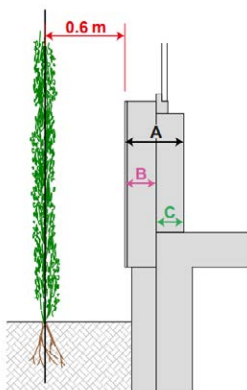


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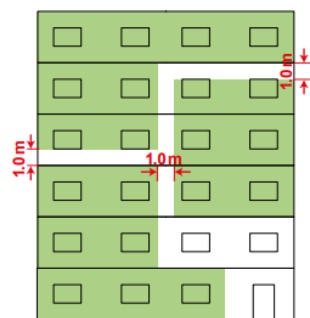


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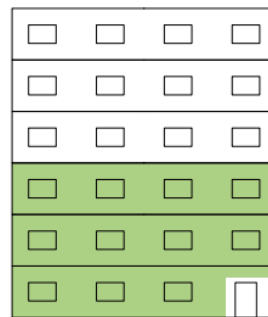


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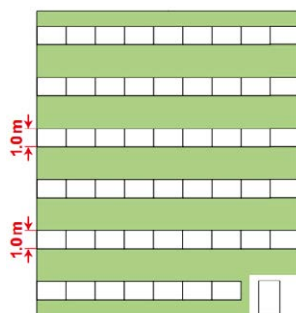


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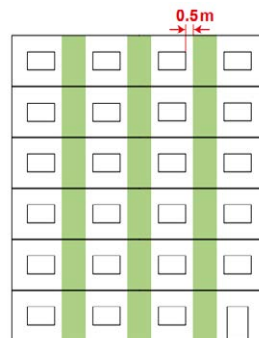


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Escape and rescue routes:

Pergola walkways must provide escape routes on both sides or also have a distance of at least 0.5 m. Alternatively, a smoke and heat extraction system (SHEVS) or a flat layer of non-combustible building materials (RF1), for example glazing, can be installed between the greenery and the escape route. (Fig. 14–16)

Materials:

The trellis structure must be made of RF1 materials (non-combustible).

No additional fire protection measures are necessary for:

- Single-family houses
- Outbuildings
- Vertical greening that extends over a maximum of three floor levels and is >1 m away from the next greening (Fig. 9 – 11).
- Greening in front of a fire-resistant exterior wall with fire-resistant windows that can only be opened for maintenance purposes.
- All rooms, with an opening adjacent to the green exterior wall, are equipped with a sprinkler system.

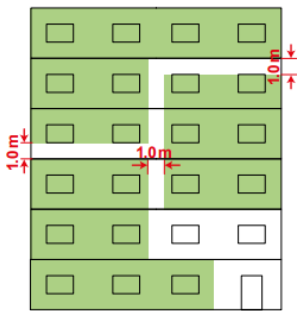


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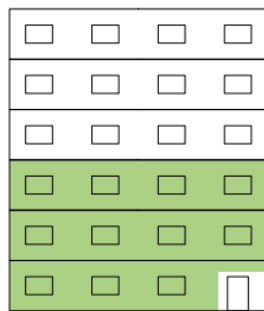


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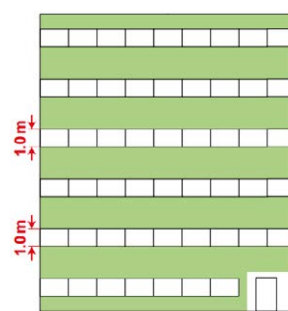


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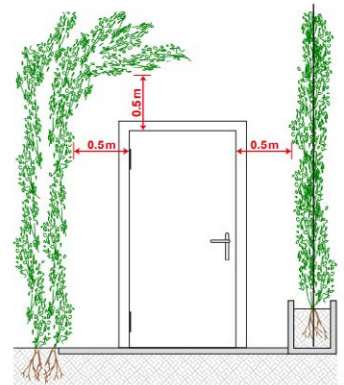


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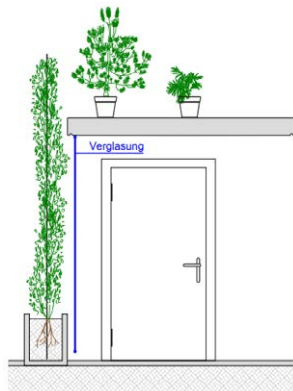


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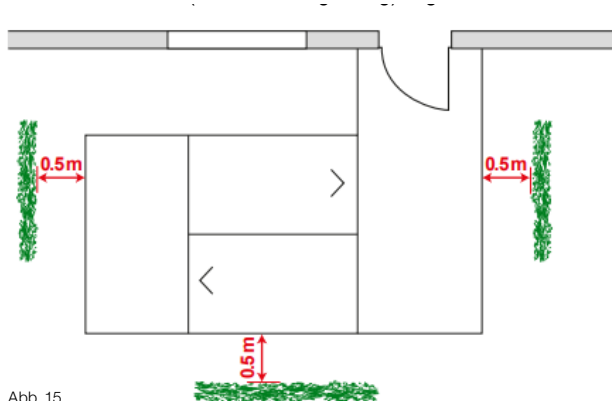


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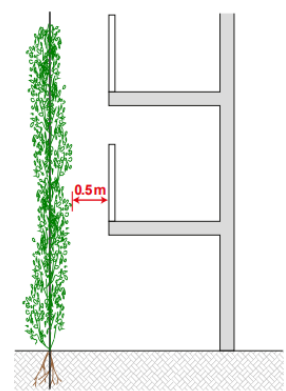


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Source (text/image):

The fire protection leaflet for building greening (VKF-Richtlinie 2011-15de [cms.vkg.ch/documents/BSPUB-1394520214-4091.pdf]) was published by the Swiss Association of Cantonal Fire Insurers (VKF) and has been valid since January 1, 2024. It is available online at www.vkf.ch.