

September 8, 2025

Signature Stone  
211 30<sup>th</sup> St.  
Greeley, CO 80631

Attention: Signature Stone Customers

Subject: Signature Stone's Signature Concrete Privacy Fencing  
Noncombustible Materials

Magnum Geo-Solutions (Magnum) has been requested to confirm that Signature Stone's concrete privacy fence products classify as non-combustible. We understand this would be in reference to fire spread concerns and whether or not a concrete fence would contribute to the ignition or spread of fire across / along property lines. The following summarizes commonly available information regarding the noncombustible nature of reinforced concrete, the primary component of Signature Stone's Signature Concrete Privacy Fencing collection.

According to standard ASTM E136 – "Standard Test Method for Assessing Combustibility of Materials", a material is considered noncombustible if it does not ignite, burn, or release flammable vapors when subjected to standardized fire test conditions. Concrete and masonry are both considered noncombustible because they are made of inert materials (primarily water, aggregate and cement). Although building codes don't specifically contain a statement that concrete is noncombustible, there are several indirect references that confirm what the engineering industry accepts:

- The National Fire Protection Association (NFPA) references that concrete, masonry, glass and steel are noncombustible.<sup>1,2</sup>
- Section 603.1 of the International Building Code has a list of combustible materials that are allowed in Type III construction. That list includes wood and plastic, but not concrete – because concrete is noncombustible.
- Most of Chapter 7 of the International Building Code discusses fire protection. There are several tables (especially in sections 721 and 722) that show how concrete provides fire protection to other structural elements in buildings for several hours. These same tables show that concrete does not need any additional protection (except for more concrete).
- The American Concrete Institute has an entire document (ACI 216.1) dedicated to determining Fire Resistanc of Concrete and Masonry Construction Assemblies. While the title may not be clear, the intent of the document is to describe how much extra concrete is needed to protect the reinforcing steel (rebar) inside the concrete. The concrete is the protector.

- Wildfire Partners and Boulder County have specifically stated that masonry fences are non-combustible<sup>3</sup>, and concrete has the same components as masonry.
- Chapter 2 of the International Wildland-Urban Interface Code lists definitions<sup>4</sup>. Under “Noncombustible Roof Covering” it lists concrete elements such as cement shingles, exposed concrete slab roof, and concrete roofing tile.
- Section 909 of the International Building Code has 2 different subsections where concrete encasement is an allowed option to protect building systems from fire.
- Several structural engineering industry papers describe how concrete reacts in a fire.<sup>5,6,7</sup> They describe how the concrete will eventually fail, but not by burning. Instead, the concrete can eventually lose its strength if subjected to extremely high temperatures for an extended period.
- Local experience has shown that concrete foundations are usually intact and re-usable after a house fire because they did not burn.

As stated above, it is generally accepted that concrete is non-combustible. This report provides additional background information for those people who wish to investigate further.

If you have any questions, please contact the undersigned.

Sincerely,  
**MAGNUM GEO-SOLUTIONS, LLC**

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*Senior Engineer*

#### References

- 1 - <https://www.nfpa.org/news-blogs-and-articles/blogs/2021/02/19/construction-types-and-material-combustibility>
- 2 - <https://nfsa.org/2023/08/22/understanding-combustible-materials/>
- 3 - <https://wildfirepartners.org/fences-are-fuses/>
- 4 - <https://codes.iccsafe.org/content/IWUIC2018/chapter-2-definitions>
- 5 - <https://www.concretescience.com/concretescience-blog/icaci-2018>
- 6 - <https://www.edtengineers.com/blog-post/fire-effects-concrete>
- 7 - <https://www.wje.com/knowledge/articles/detail/nondestructive-evaluation-of-fire-damaged-reinforced-concrete>

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