



# 4 facts about the fire resilience of stone wool



FIRE SAFE  
**INSPIRED  
BY  
NATURE.**

# In recent years, high-profile fire incidents have led to increased scrutiny of the fire safety of our buildings, leading to many countries strengthening their requirements for the fire properties of building materials.

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Over 3.7 million fires occur in cities worldwide every year and more than 43,000 lives are lost as a result. This, combined with the fact that fires today develop more than six times faster than in the 1950s, means there are good reasons for looking at improving fire safety requirements.

Fire resilient insulation materials, such as stone wool, play a crucial role in improving the fire-resistance of buildings. The thermal properties help limit the spread of fire and assist in ensuring a safer environment for all residents.

## Stone wool contributes to fire resilience

Stone wool is more than a fire resistant material. In fact, it is a fire resilient material. By hindering the spread of fire, it decreases fire-related damages and the associated environmental, societal and financial impacts.

By minimising the potential impact of fire, stone wool products also contribute to maintaining a healthy and safe environment. ROCKWOOL insulation products truly support fire resilient societies.

2

## Stone wool is a fire barrier that does not fuel or spread a fire

During a fire, stone wool helps to ensure the integrity of the building structure and to reduce the transfer of heat to another space for long periods of time – over 90 minutes in many cases.

These characteristics stem from stone wool's very high melting point – of over 1,000°C – and excellent thermal insulation properties. As a fire barrier, it is often used to protect combustible elements as well as steel structures from fire to give residents more time to evacuate the building and to give firefighters a safer environment to extinguish the fire and rescue people.

1. Fire Statistics United Kingdom 2007, Department for Communities and Local Government, August 2009.

2. FIW, Durability Project Mineral Wool (2016), "Conclusions and Outlook." Available via EURIMA (European Insulation Manufacturers Association) at [https://www.eurima.org/uploads/ModuleXtender/Publications/168/2017-02-21\\_EURIMA-55YearsOfUse\\_Info\\_Sheet\\_V08\\_final.pdf](https://www.eurima.org/uploads/ModuleXtender/Publications/168/2017-02-21_EURIMA-55YearsOfUse_Info_Sheet_V08_final.pdf), accessed at 23 Jan 2020.





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### **Stone wool does not contribute significant amounts of toxic smoke**

Unlike other insulation products, ROCKWOOL stone wool will not fuel or spread a fire, nor contribute significant amounts of toxic smoke.

Inhaling toxic smoke from fires can be extremely dangerous, and is the cause of most fire-related casualties. In sufficiently high concentrations over a long enough time, toxic smoke creates hazardous health conditions for people exposed to it and may

impede their ability to rescue themselves from the fire. Various tests have shown that stone wool does not produce significant amounts of toxic smoke and makes a negligible contribution to fire toxicity in comparison to other insulation materials. This is also due to the very low organic content of stone wool insulation, which is approximately three percent, compared to up to 100 percent in other products).

4

### **Stone wool's fire properties are long lasting and need no added flame retardant**

The fire safety performance of stone wool lasts a lifetime, with no maintenance required. A FIW München durability study revealed that stone wool samples retained the same mechanical and thermal properties and thus fire resistance, more than 55 years after installation.

To explore the exceptional properties of stone wool further, visit:  
<https://www.rockwool.com/group/about-us/inspired-by-nature/>



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At the ROCKWOOL Group, we are committed to enriching the lives of everyone who comes into contact with our solutions. Our expertise is perfectly suited to tackle many of today's biggest sustainability and development challenges, from energy consumption and noise pollution to fire resilience, water scarcity and flooding. Our range of products reflects the diversity of the world's needs, while supporting our stakeholders in reducing their own carbon footprint.

Stone wool is a versatile material and forms the basis of all our businesses. With approx. 10,500 passionate colleagues in 38 countries, we are the world leader in stone wool solutions, from building insulation to acoustic ceilings, external cladding systems to horticultural solutions, engineered fibres for industrial use to insulation for the process industry and marine & offshore.

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