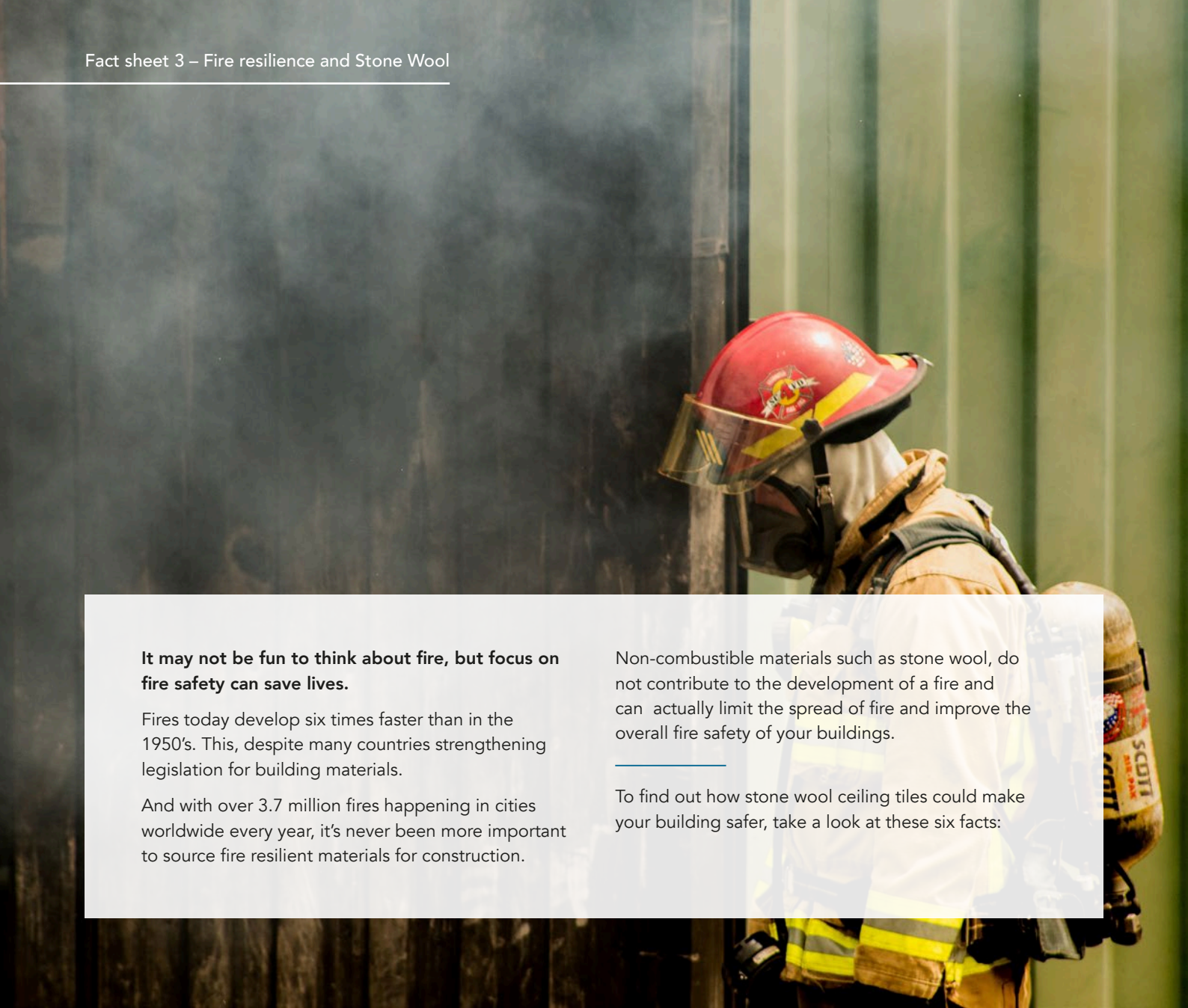




**6** FACTS ABOUT | **The fire resilience** of stone wool ceiling tiles



**It may not be fun to think about fire, but focus on fire safety can save lives.**

Fires today develop six times faster than in the 1950's. This, despite many countries strengthening legislation for building materials.

And with over 3.7 million fires happening in cities worldwide every year, it's never been more important to source fire resilient materials for construction.

Non-combustible materials such as stone wool, do not contribute to the development of a fire and can actually limit the spread of fire and improve the overall fire safety of your buildings.

To find out how stone wool ceiling tiles could make your building safer, take a look at these six facts:

**01 Stone wool ceiling tiles limit the spread of fire**

When installing or renovating a ceiling, it's vital to choose materials that don't burn or assist the spread of fire. You need the opposite – safe, resilient materials that actually hinder flames.

Stone wool ceiling tiles have a very low calorific content. This makes them certifiably non-combustible<sup>1) 2)</sup> and able to minimize fire from spreading via their surface to other materials. Ultimately, this means stone wool ceiling tiles can buy precious time to both extinguish a fire and enable a safe evacuation.

**02 Stone wool ceiling tiles improve safety with fire resistance**

Products made with stone wool, like ceiling tiles, are generally non-combustible (depending on their fire classification) and can add to the fire resistance and fulfil some countries national requirements on this regard.

When you're looking to choose ceiling tiles it is important to choose non-combustible tiles that can add to the fire resistance of the ceiling. Inherently, stone wool is a natural fire barrier.<sup>3)</sup> Stone wool ceiling tiles can help you create a safer environment, which means that occupants have more time to evacuate and firefighters have more time to extinguish flames.

1. CE marking  
2. DS/EN 13501-2:2016 - Fire classification of construction products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services, Dansk standard  
3. CONLIT calculation program, available via <https://www.rockwool.se/support/berakningsprogram/conlit-brandsikring-berakningsprogram/>, accessed at 23 Jan.2020.



### 03 Stone wool ceiling tiles can help reduce fire related costs

Resistance? Resilience? Aren't they the same thing? Fire resistance is how well a material withstands burning, while resilience refers to the ability of the building to continue functioning after the fire has stopped. By having a non-combustible ceiling, the risk of a fire spread is reduced and therefore it can help minimize the damage to the building.

Stone wool ceiling tiles can offer both. It not only hinders the spread of fire, it decreases fire-related damages and environmental, societal and financial impacts. In a world where 1% of global GDP is spent on fire damage every year<sup>4)</sup>, fire resilient materials can create huge savings. More importantly, by minimizing the potential impact of fire, stone wool products help maintain safer, healthier, more fire resilient societies.

### 05 Avoid materials with halogenated flame retardants

"Flame retardants are chemicals that are added or applied to materials in order to slow or prevent the start/growth of fire. They have been used in many consumer and industrial products since the 1970s, to decrease the ability of materials to ignite."<sup>6)</sup>

Although flame retardants are widely used, new research shows that some types are toxic for our health and environment. Thankfully, materials like stone wool are naturally fire resistant, so you don't need to apply potentially toxic flame retardants. That makes stone wool ceiling tiles safer in more ways than one.

### 04 Use building materials with low smoke toxicity

Although fires can make us think of flames and heat, the real danger is toxic smoke. In fact, inhalation of toxic smoke is the biggest cause of fire-related casualties.<sup>5)</sup> High concentrations of toxic smoke create a hazardous environment that can also make it harder for people to escape fire.

Certain materials produce much more toxic smoke than others, depending on the type and the amount of organic content. Stone wool ceiling tiles have very low organic content and they produce very little smoke.

### 06 Use building materials that last

Maintenance has a huge impact on fire safety. Your building may have been perfectly safe the day it was built, but if it is not appropriately maintained over time some materials can become susceptible to fire. Why not choose materials that have properties that last a long time? Non-combustible stone wool ceiling tiles retain their fire resistance over time, which gives you extra time for a safe escape in the case of fire.

When you choose stone wool for your ceiling, you not only get superior acoustics, you can relax knowing the material is naturally fire resistant, fire resilient and durable. Stone wool ceiling tiles remain as safe as the day they were installed.

**👉 Inspired to learn more about fire resilience and stone wool? Explore the product benefits section on our webpage.**

4. The Geneva Association, World Fire Statistics Bulletin No. 29 (Downloaded in January 2020 from <https://www.genevaassociation.org/research-topics/world-fire-statistics-bulletin-no-29>)  
5. Fire Statistics United Kingdom 2007, Department for Communities and Local Government, August 2009  
6. Stec A. and Hull R., Assessment of the fire toxicity of building insulation materials, Energy and Buildings, 43, pp. 498-506, 2011

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