

SILICONES & CONSTRUCTION

Did you know?



You may know silicones as the material of your favourite kitchenware or your swimming cap. But did you know silicones play a key role in many aspects of construction?

Silicone materials have revolutionised construction since they were first introduced on the market in the 1960s.

A SELECTION OF APPLICATIONS



Structural glazing



Thermal insulation



Restoration



Coatings



Water repellence



1.7 MILLION PEOPLE ACROSS EUROPE ARE EMPLOYED IN SECTORS THAT ARE RELATED TO SILICONE PRODUCTS.

Silicones are part of a bigger value chain that create jobs and enable a better quality of life for us.

A SNAPSHOT OF HOW SILICONES HELP IMPROVE OUR LIVES



SILICONE SEALANTS, ADHESIVES AND COATINGS

LONGEVITY

Sealants last typically 3 times longer than organic equivalents **x3**

WATER RESILIENCE

Additives / coatings reduce water ingress **80%**

ENERGY EFFICIENCY

Silicones improve building energy efficiency

You will find more information on the socio-economic contribution of silicones in our report available at silicones.eu



THEY IMPROVE LONGEVITY AND REDUCE LIFECYCLE COSTS.

••• Silicone products offer substantial savings over the lifetime of a product.

••• Silicone sealants last three times longer than organic materials used in the same applications.

A published example evaluates the potential savings silicone sealants could bring as opposed to urethane based sealants. It shows that by using silicone to re-caulk an 8-storey building can help save up to €112,000 in addition to providing additional durability.

Silicone additives are vital for insulating materials. Studies have shown that filling a brick façade with silicone additives instead of alternative masonry water repellent techniques, emits 13 times less Greenhouse Gas (GHG) emissions. These additives are vital for insulating materials to work effectively.

THEY PROTECT BUILDINGS.

••• Silicone coating reduces degradation and helps lengthen the operational lifetime of the material.

••• This prolongs the lifetime of buildings and façades and avoids or delays maintenance and repair costs arising from water or damp damage.

••• The colourless silicone treatment applies flexibility and durability as well as improved UV resistance.

THEY IMPROVE ENERGY EFFICIENCY.

••• Using silicone additives in construction emits 13 times less GHG emissions.

*By using products made with silicones, you generate on average **9 TIMES LESS GREENHOUSE GASES** than were emitted during manufacturing and disposal of that product.*



PUT SIMPLY, SILICONES MAKE THINGS WORK BETTER!

WANT TO KNOW MORE?

This is just a snapshot of some of the applications in which silicones are used. For more information on silicones in other construction applications, the following website will help you find what you need:

WWW.SILICONES.EU

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This factsheet is one of a series developed by silicone producers in Europe to highlight some interesting and surprising facts about the use of these innovative materials and how they contribute to Europe's goals of smart, sustainable and inclusive growth.