

Silicones: A world of sustainable surprises

Modern society expects technical innovation and product development to improve quality of life and further long-term sustainable development. Silicones help make these possible.

Silicones are a versatile family of synthetic products ultimately based on sand. They are used in a remarkably diverse range of applications from construction to electronic and electrical appliances, medical devices and household products, to name but a few. Prized for their versatility, they make literally millions of products perform better, last longer and be more efficient. Here are some outstanding examples of silicones in action.

Innovative architecture with structural glazing

Structural glazing – the vast expanses of glass that are such a feature of modern architecture – depends on silicone sealants. They also further innovative moves towards more environmentally-sound architecture.



A well-known example is the European Commission's Berlaymont building, situated in Brussels, Belgium. Twenty-one kilometers of advanced silicone joinery not only bond the glass to the renovated façade but are also integral to the 21,000 computer controlled mobile glass louvers that help even out temperature within the building by retaining warmth during the winter and protecting against solar heat during the summer.

Reliability for wind turbines

Advanced adhesives made from silicones bond the giant rotor blades of wind turbines. 100 metres off the ground or the sea, silicone adhesives resist the roughest conditions and extremes of temperature, reliably keeping together materials that used to be difficult to unite.





Keeping barnacles off ships

Barnacles, sea creatures which build up on the hulls of ships, slow vessels down and increase energy consumption. Special silicone coatings do not kill barnacles but prevent them from sticking, providing significant benefits for fuel efficiency and environmental protection.



'Green tyres' for fuel efficiency

Car manufacturers are constantly trying to improve the environmental performance of road vehicles. Silicone technology has helped produce tyres with reduced rolling resistance, reducing fuel consumption. They also grip better in wet conditions, improving road safety.

Preserving precious heritage

Sustainability is also about culture. Around the world, silicone coatings are now one of the foremost materials to protect historic monuments against weathering and pollution. They not only prevent decay and corrosion but also penetrate architectural stonework to strengthen it while not undermining any aesthetic aspects.



Safety and reliability for electrical devices

Silicone insulators have become a premium insulator for electrical devices, from the very smallest to the largest, increasing safety, longevity and reducing breakdown. They are more and more used in tiny devices, as the drive to miniaturisation continues.

For more information on silicones and their applications, please go to www.silicones.eu