

SILICONES: A SMALL PARTNER FOR BIG GOALS

In a context of heightened global concern around sustainability and climate change, being first-in-class to meet the UN's Sustainable Development Goals (SDGs) has never been higher on the agenda – and the silicones industry is stepping up its game to deliver workable solutions.

Silicone materials are a vital component in many of the products that make sustainability possible. Through coating, protecting and shielding, the countless applications of silicones have consistently delivered better efficiency, reliable performance and more durable, longer lifetime for key technologies.

Performance, safety and innovation have characterised silicones for decades and pushed this extraordinary chemistry to the forefront of technological advances. Here are five key SDGs which silicones support.



Silicones improve the quality of life of many patients, with life-changing medical equipment and products, constantly pushing the barriers of innovation to give users a normal, healthy life. Silicones are unrivaled in many advanced medical technologies, such as artificial hearts and electronic prostheses because, among other benefits, they have a wide range of performance characteristics making them suitable in a multitude of medical applications; they can withstand sterilisation, are hypoallergenic and biocompatible.



As key components in Europe's booming renewable energy sector, silicones contribute to transitioning Europe's energy system towards cleaner energy sources and helping Europe reach its renewable energy targets. Silicones are essential in wind turbines and solar panels to shield components from harsh weather conditions and improve their durability and efficiency.



Silicones have revolutionised the digital and Information and Communications Technology (ICT) sectors by enabling high-performing and durable devices thanks to their thermal-, moisture- and wear-resistance. Silicone technology lies at the heart of smartphones, computers, LEDs and even batteries. For example, electric vehicles would not function without silicones protecting the batteries from heat, cold, moisture, contaminants, and temperature fluctuations.



Silicones play a key role in keeping buildings energy efficient and well-insulated. They prevent building degradation thanks to their extreme durability and resistance to water, UV and chemical damage when used in coatings, structural glazing, or sealants, among other uses. By providing additional longevity, silicones also reduce lifecycle costs, offering substantial savings.



Silicones help Europe lead the way in reducing CO2 emissions. Many transport modes are more energy efficient thanks to the role silicones play in reducing fuel consumption, particularly in hard-to-abate sectors such as ships and planes. This is due to the durable nature of silicones, the reduced drag they provide to vehicle surfaces, as well as their impact in overall weight-reduction of vehicles which affects their energy efficiency... not to forget their essential role in enabling clean and renewable energy technologies.

SILICONES ARE VITAL CONTRIBUTORS TO EUROPE'S SUSTAINABLE ECONOMIC GROWTH

Total sales of silicones in Europe are estimated at 2.5 billion € per year, making it a significant economic sector which accounts for some 10,000 jobs – and a much higher number across its value chain. The use of silicones in Europe generates an impressive € 9 billion of wealth per annum for the European society. But there is more to silicones' social and economic benefits: by enhancing the performance of products and appliances, the true value of silicones lies in their role in accelerating Europe's path to a more sustainable, competitive and greener economy.