

kSilTM

Silicone
Engineering Ltd

Our kSil™ range is designed specifically for producing calendered silicone sheeting in solid, sponge and fabric form.

We have our own development and testing laboratory and mixing facilities, where we rigorously test each batch under controlled conditions before production. This ensures our materials perform to the highest quality standards, and are suitable for all kinds of applications in a wide range of industries.

It also means we have the in-house expertise to 'tweak' kSil™ formulations to meet our customers' often unique needs and specifications.

Our kSil™ GP materials offer all the resilience and versatility of silicone rubber, and are ideal for industries where adverse temperatures are an issue – or where an inert, robust polymer is required. They also comply with a range of industry standards, such as those of the Food and Drug Administration (FDA), and the Water Regulations Advisory Scheme (WRAS).

The solid kSil™ range is available in A-scale shore hardness of 40 to 70, while the sponge kSil™ range are offered density from 10 (very soft) to 33 (hard). kSil™ is available in white, red, black and translucent (solid sheeting only), and we offer a colour-matching service for special requirements.

In addition to the kSil™ GP range, we offer specialist products for more demanding or unusual environments. Over 50 years, we have continuously developed, refined and improved an impressive range of silicone formulations to comply with new legislation and specifications, and to meet ever-changing customer needs.



Some of our most popular specialist kSil grades include:

- kSil™ FR** flame retardant and self-extinguishing
- kSil™ THT** for higher temperature resistance
- kSil™ LCH** low smoke and low toxicity silicone for public safety
- kSil™ HT** solid high-tear material for more rugged environments
- kSil™ UL** sponge materials compliant with UL94v0 flammability standards

If you don't see a kSil™ product here that meets your specific needs, get in touch and tell us more. We can arrange a site visit to discuss your requirements, develop samples and quickly provide a rigorously tested, industry-compliant kSil™ product that matches them.

Wide-ranging Applications

Our kSil™ sheeting is generally used in the manufacture of seals, gaskets and washers. Often, customers buy kSil™ sheeting and convert it for use where a silicone polymer's specialist properties are needed – for example on domestic boiler sealing gaskets, or as vehicle airbag washers.

Its versatility means kSil™ is also widely used in other sectors and markets, such as in thermoforming machines, heater pads and insulation linings – it has even been used in fashion design.

The kSil™ range covers almost every silicone sheeting requirement. And because we have such extensive knowledge, experience and in-house capability, our products offer reassuringly high quality standards.



Product Availability



Formulations

Products

Sheeting (kSil™)

	Solid	Sponge	Fabric
GP – General Purpose	●	●	●
HT – High Tear	●		
FR – Flame Retardant	●	●	●
THT – High Temperature	●	●	●
UL – UL94v0 Rated		●	
LCH – Low Smoke & Toxicity	●	●	●
FS – Fluorosilicone	●		●
VAC – Thermoforming	●		●

Special Grades

metectSil	●	●	●
neutraSil	●		●
reactaSil	●		●

Just to put the scale of our kSil™ mixing and sheeting manufacturing facilities into perspective take a look at the summarised asset inventory of machinery used in the production of these products.

Our on-site mixing facility consist of:

Banbury Mixer	●
Winkworth Mixers	●●●
Mixing Mills	●●●
Barwell Pre-Formers	●●

Solid sheeting lines consist of:

Compound Extruder	●●
Calenders	●●
Pre-Cure Systems	●●
Post-Cure Ovens	●●●
Winding/Trimming Station	●

Our fabric sheeting lines consist of:

Fabric Priming System	●
Pre-Cure Systems	●●
Calender	●
Online Rewind Unit	●
Winding/Slitting Machine	●

Market leading sponge sheeting line:

Compound Extruder	●
Calender	●
Pre-Cure System	●
Post-Cure System	●
Winding/Slitting Machine	●●
Heated Roller Unit	●

● = Number of Assets

Image Right

*Fabric sheeting
in production...*





Expertise for all sectors and industries

Silicone Engineering has designed and manufactured over 2,000 products and materials to address a wide range of issues – for many customers, across many sectors and industries. We also have our own test laboratories, with the latest technology and equipment, which support the many innovative products and services we provide.

Extensive in-house capabilities

Because we design and test our own products, our customers have added faith in our processes and services. In other words, our focus on research and development means our customers know what we provide will meet their needs.

Our in-house testing procedures include:

- rheology: the study of how liquids and 'soft solids' flow
- physical behaviour under stress and fatigue
- fatigue through exposure to extremes of temperature
- fire rating
- toxicology
- spectrum control
- density, hardness and volume evaluations

As an example of how we use our testing facilities, we can assess compounding material from 1kg laboratory trials up to 2,000kg production mixes, produced in one of our 'D' chamber mixers or one of our five 'Z' blade mixers. Or we can mill-mix batches from one of our six mills. We test each mix for quality control conformance and shore hardness verification, so every batch we provide meets the highest standards and defined specifications.

Image Right

*Quality control every
step of the way...*





[Support for planning and compliance](#)

Once compound materials are approved, they are logged on our enterprise resource planning (ERP) system, to help with compliance management and planning control. We then process them on our calender sheeting or extrusion lines in accordance with ISO9001:2008 quality management processes.

We monitor, process and batch-test vulcanised materials to our own strict international standards for tensile strength, stress strain, tear strength, elongation, heat age conditioning and compression. And on request, we can send documented test results for each batch of vulcanised materials we deliver. Our delivery lead times are world-class.

[Continuous development and improvement](#)

Our significant investment in technology and equipment for research, development and production means we can quickly and effectively meet a wide range of requirements. With some of the best-equipped testing and manufacturing facilities in the industry, we can design, manufacture and verify the most suitable silicone products for almost any application. This also means we can continually look at ways to improve our products and services, and offer unrivalled after-sales support.

The latest innovations

At Silicone Engineering, we always aim to be at the forefront of silicone technology innovation. This is the only way we can be sure to keep providing you with the products that meet your specific needs – whatever industry you're in, and no matter how rapidly it's changing. Using more than 50 years' experience, and with unrivalled technical resources, we'll work with you, closely and confidentially, to develop cost-effective solutions to any silicone challenge.

[In the laboratory](#)

With one of the best-equipped laboratories in the industry, we can develop and introduce new materials to very tight deadlines. But that doesn't mean cutting corners: we formulate, test and certify all our material developments to the relevant standards before going to market. Using our comprehensive mixing and compounding facilities, we currently process more than 1,200 tonnes of silicone each year, and maintain full quality control and material integrity at every stage.

[More than materials](#)

Innovative materials often need new processing methods to ensure their properties are maintained, or even enhanced, when they're used in manufacturing. So our creative approach doesn't stop once we've developed a new material: we also use our manufacturing expertise to prototype, refine and keep improving the processes in which our materials are used. This means continually investing in equipment – to ensure your new products give you the performance you need, at the right price.

On a mission to innovate

Many businesses claim to be innovative – but for us, it's a matter of survival.

To keep our customers coming back to us, we have to keep developing new ways of using silicone. So innovation is central to our business.

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