



**PREMSIL**  
PREMIUM SILICONE

.....  
SILICONE SPONGE SOLUTIONS  
FOR LIGHTING SYSTEMS



# PREMSIL

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## OVERVIEW

In today's day and age, the range of elastomers available to lighting engineers and designers is quite extensive. Unsurprisingly, with so much choice, choosing the right material can become difficult and it's easy to get lost in an ocean of information, grades, hardnesses and specifications.

Failing to choose the correct material often results in the application also failing, through water, dust ingress or other issues. Downtime and repair costs are certainly not the preferred option so it is vital to choose the correct material first time.



## WHY CHOOSE SILICONE SPONGE?

Silicones have extreme temperature resistance, chemical stability and low compression set. It's that fantastic sealing ability which makes it the material of choice in many lighting applications, performing comfortably with the heat generated in lighting enclosures. This, coupled with silicone's excellent environmental resistance, allows for use in outdoor applications where protection from weathering is critical for performance. Silicone's inherent durability to weathering reduces the life cycle cost & maintenance regime significantly. Naturally, a sponge also offers an inherent cost saving and improved sealing properties over a rubber counterpart.

## WHY CHOOSE PREMSIL?

### KEY BENEFITS:

- Efficient- Typically 10-15 working days lead times with an express line available for urgent orders.
- Expertise- We manufacture from raw materials so we can adjust to suit densities, sealing pressure, specific shapes & IP requirements
- Smooth Skin
- UL94V-0 compliant grades
- High Temperature grades -50°C to +280°C for extreme temperature resistance
- Low smoke/toxicity
- Closed Cell- low water/dust ingress
- Low compression set for great sealing ability & recovery
- Excellent tear resistance
- Lightweight
- Weather resistant- UV, Ozone, Rain, Frost
- Low outgassing product
- Rail specific grade available for use in transport applications

**Sheets, Cord, Extruded profiles,  
Joined rings, Cut gaskets. PSA  
Available.**

### PREMIUM SILICONE SPONGE LTD.

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## LED LIGHTING APPLICATIONS

**PREMSIL** silicone sponge is fantastic for use in a huge range of lighting applications. It's no surprise with the current drive to save costs, and more importantly energy, that many lighting systems are now making the switch over to LED, and this is where PremSil Silicone Sponge excels. Designers need to consider the extreme heat that can be often generated from the diodes - where other rubbers simply cannot withstand these extreme temperatures and conditions, we offer a product born for it.

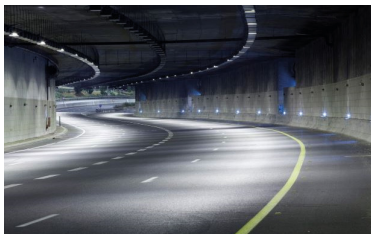
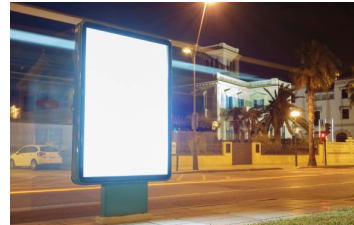


### LED Street Lights

PremSil Silicone Sponge can be used for gaskets and seals in high powered, outdoor LED lighting such as street lights. Thanks to silicone sponge's enhanced flexibility, it ensures a tight seal is easily achieved, and protects the electronics and parts within the casing.

### Outdoor Electrical Displays & Signage

LED is quickly becoming the 'go to' system for signage and electrical displays, allowing eye-catching images and sending clear messages to the public. As these displays are often active 24/7, the heat generated within can be substantial, and PremSil Silicone Sponge is well suited to handle these extreme temperatures, whilst also combatting weathering, protecting the systems from water and dust ingress.

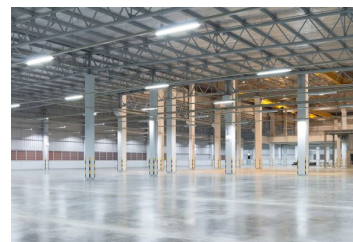


### LED in Transport- Road and Rail Tunnels

LED Systems are used more and more within tunnels, not only offering the benefits of low maintenance and repair costs, but also providing a safer journey for travellers with a superior lit environment. PremSil not only offers a solution for seals and gaskets; with low smoke and low outgassing, it also helps maintain the improved visibility and safety of the tunnel.

### Industrial Lighting

Specific & accurate levels of lighting are often required in industrial spaces, to allow the detail orientated or risky work to take place. Crucially, these lighting systems need to withstand various conditions, such as extreme temperatures, dust or moisture, to maintain those levels of lighting. PremSil Silicone Sponge provides the perfect platform to allow LED systems to tackle such issues head on, with excellent resistance to extreme temperatures and low water & dust ingress.



### Off-Shore Rigs

The conditions faced on off-shore rigs would certainly put any material to the test, with extreme weather conditions often battering away at anything in sight. Where other materials fail to stand up to the never ending war against the weather, PremSil Silicone Sponge offers superior resistance to UV, Ozone, rain, frost and other environmental elements, making it an ideal material to be used in the harshest of environments.



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## INTERNATIONAL CUSTOMERS

Our product is exported globally to some of the largest industries and end users, so we understand the value of a responsive service.

Our efficient production permits us to deliver some of the lowest lead times in the industry. In many cases we can deliver our products quicker than your domestic suppliers, even factoring in the delivery time.

Due to innovative packaging we have reduced the size of packaging by up to 50% , which represents a tremendous saving on shipping costs and is also a good sustainable practice.

We export using a variety of reliable shipping methods giving you the confidence to repeat order and receive consistent delivery.



EXCELLENT MOISTURE & CHEMICAL  
RESISTANCE



-50°C up to +280°C.  
EXCELLENT TEMPERATURE RESISTANCE



EXCELLENT RESISTANCE  
TO UV/ OZONE

LIGHTING SOLUTIONS



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## PREMSIL SILICONE SPONGE DATASHEET

Properties	P10	P16	P24	P33
Density (Imperial)	10 lbs/ft <sup>3</sup> (+/- 4)	16 lbs/ft <sup>3</sup> (+/- 4)	24 lbs/ft <sup>3</sup> (+/- 4)	33 lbs/ft <sup>3</sup> (+/- 4)
Density (Metric Kg/m <sup>3</sup> )	160Kg/m <sup>3</sup> (+/- 65)	255Kg/m <sup>3</sup> (+/- 65)	390Kg/m <sup>3</sup> (+/- 65)	530Kg/m <sup>3</sup> (+/- 65)
Density (Metric g/cm <sup>3</sup> )	0.16g/cm <sup>3</sup> (+/-0.06)	0.25g/cm <sup>3</sup> (+/-0.06)	0.39g/cm <sup>3</sup> (+/-0.06)	0.53g/cm <sup>3</sup> (+/-0.06)
Elongation at break (%)	200	215	225	245
Compression set (%)	15	15	15	10
Tensile strength (Mpa) 10mm thick	0.5	0.65	1.10	1.60
Tensile strength (newtons) 10mm thick sample	50	65	110	160
Temperature Max (°C)				
Continuous	200	200	200	225
Intermittent	200	200	225	250
Temperature (Min) °C	-50	-50	-50	-50
Toxicity NES 713 ISS.3	14	14	14	14
Smoke Index NES 711 ISS.2	46	46	46	46
Burn rate BS 4735: 1974	0.03mm/s	0.03mm/s	0.03mm/s	0.03mm/s
Thermal Conductivity (W/m.K)	0.0695 W/m.k	0.0695 W/m.k	0.0695 W/m.k	0.0695 W/m.k

\*Extreme Temperature and UL94V0 compliant grades available.

\*\*Please note our information is based on lab tested samples. Technical data is provided in good faith, but without warranty.

End users should check to ensure our products are suitable for their intended use.

For more information, advice or a quote go to:  
[www.premiumsilicone.co.uk](http://www.premiumsilicone.co.uk)

Or send us an email: [ask@premiumsilicone.co.uk](mailto:ask@premiumsilicone.co.uk)

Call now on (0044) (0)1254 660544 and speak to one of our friendly team

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PREMIUM  
EFFICIENCY



PREMIUM  
QUALITY



PREMIUM  
GUARANTEE



PREMIUM  
PARTNERSHIP

**Got an enquiry? Get in touch now!**

Contact one of our friendly team now on the email or telephone number below.

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