

Q-LON

Seal
right.



SCHLEGELGIESSE
MADE FOR THE FUTURE

Q-LON POLYURETHANE FOAM SEALS: PROVEN AND TESTED FOR ALMOST 50 YEARS

Made with a unique combination of materials and with technical performance unmatched by any other material used in seals, Schlegel Q-LON offers the highest standard of sealing function – even under extreme conditions.

Continuous research and development, as well as strict material inspection and quality inspections, have made Q-LON one of the best established sealing systems in the industry today.

- Polyurethane (PU) foam core – high durability, superior recovery performance
- Polyethylene (PE) film – weather and UV-resistant
- Glass fibre thread or polypropylene (PP) insert – prevents elongation and shrinkage
- Smooth or embossed exterior, resistant to contamination
- Compatible with cleaning agents

Independent Testing

Q-LON has been extensively tested by independently certified test facilities that clearly demonstrate its superior performance over other commonly used seal materials and constructions. In particular, it has been shown that Q-LON seals retain their properties and performance significantly better over time when, after 10,000 cycles of window and / or door opening and closing, other materials lose their ability to meet the normal operational requirements.

Areas affected include weathering performance, thermal insulation, sound attenuation and air tightness.

A good guide to the performance of weatherseals and gaskets can be found in EN 12365:2003. For a greater insight into this and other performance norms, please refer to the Schlegel 'Guide to Weatherseal Selection & Specification in Europe'.



Tested and certified by:



Each seal was tested for air permeability and water tightness in two steps.

- 1. Initial test:** EPDM and Q-LON seals were tested on identical brand new windows.
- 2. Repeat test:** the windows underwent 10,000 full operation cycles, equivalent to a 15-years life cycle, and they were then tested again under the same conditions as the initial test.

The repeat test gives a measure of the seal's ability to perform after intense usage.



Air Permeability

Q-LON performed significantly better for air permeability during the initial test, but it also continued to provide an effective seal, even after 10,000 full operations of the window. **After the repeat test, the performance variance was just 2.33%.**

EPDM seals provided significantly less effective proofing against draughts during the initial test, and they also experienced a drastic drop-off after 10,000 operations: **they were 28% less effective after the repeat test.**

**EPDM seals
initial test**

7.4

m³/m/hr
air leakage
at 600 Pa

**Q-LON seals
initial test**

0.8

m³/m/hr
air leakage
at 600 Pa

Initial and repeat test in accordance with BS 6375-1 under UKAS accredited conditions. 10,000 full cycles of operation before the repeat test in accordance with BS 6375-2.



Water tightness

EPDM performed well initially, but its effectiveness was degraded significantly following the cycle test, indicating that **water tightness will decrease with time.**

Q-LON was proven to provide the same level of performance throughout a the service life of a window, thus **it is suitable for windows requiring exceptionally high weather resistance.**

**EPDM seals
after repeat test**

**LEAKS
AFTER 12
SECONDS**
at 400 Pa

**Q-LON seals
after repeat test**

**NO
LEAKS**
even at
600 Pa

Initial and repeat test in accordance with BS 6375-1 under UKAS accredited conditions. 10,000 full cycles of operation before the repeat test in accordance with BS 6375-2.

COMPARATIVE TESTING



Acoustic insulation

The Weighted Sound Reduction Index (R_w) rates the effectiveness of a soundproofing material. Increasing the R_w by one equates to 1dB in noise reduction.

Q-LON equipped windows proved able to reduce outside noise by 13 decibels when compared to EPDM seals mounted on the same window.

Double glazed unit
with EPDM seals



Double glazed unit
with Q-LON seals



Test conducted in accordance with BS EN ISO 10140-2, under UKAS accredited conditions.

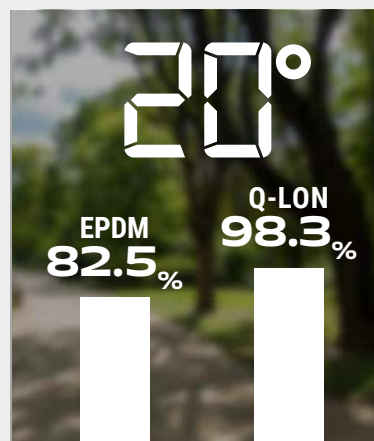
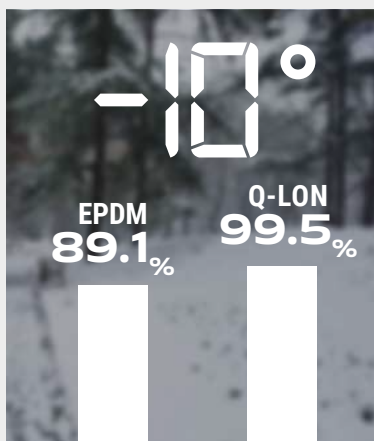


Compression recovery

This is a measure of the ability of a seal to recover its original dimensions following a period of compression under extreme temperature conditions.

In this test, seals were compressed to 50% for seven days and then given 24 hours to recover. The numbers expressed above are the percentages by which the seals had reverted to their original dimensions after the 24-hour period elapsed.

Q-LON recovers over 10% more when compared to EPDM seals, even at frigidly cold temperatures, thus continuing to perform effectively over an extended lifetime.



COMPARATIVE TESTING

Q-LON AND STANDARD EPDM COMPARISON

Q-LON foam seals

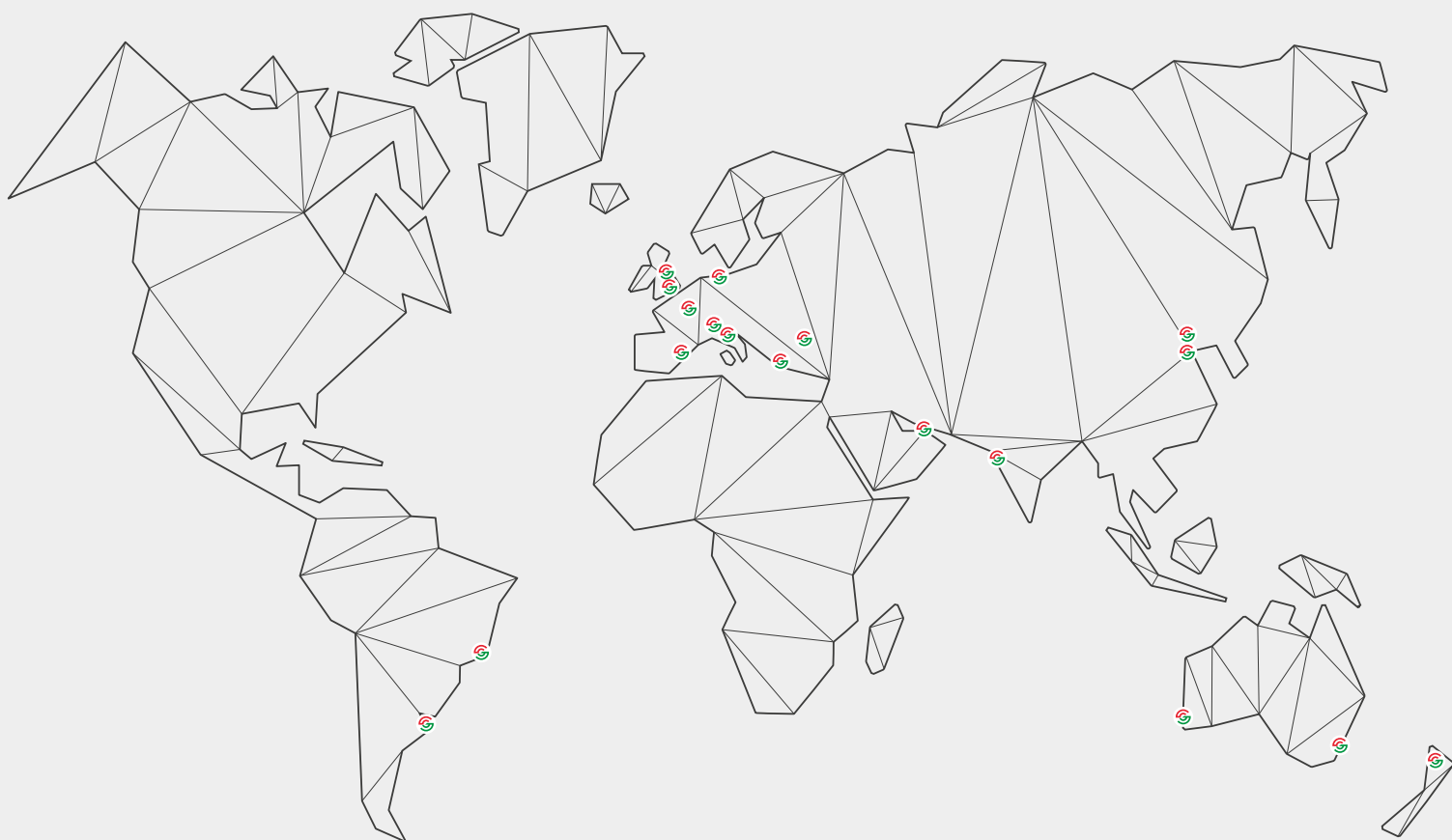
- ✓ **Memory**
Superior recovery memory after compression.
- ✓ **Stability**
Low to no stretch gained by rigid insert or glass fibre internal cord. No glue needed.
- ✓ **Compression**
Very low compression force required.
- ✓ **Acoustics**
Outstanding acoustic insulation.
- ✓ **Thermal conductivity**
0.04 W/mk.
- ✓ **Paint and stains**
Stainproof: unaffected by standard paints and stains.
- ✓ **Resistance**
Unaffected by almost all kinds of detergents.
- ✓ **Colours**
White, black, brown, grey and many other options.

EPDM seals

- ✗ **Memory**
Good recovery memory after compression.
- ✗ **Stability**
Needs glue or risks detachment due to shrinkage in cold environments.
- ✗ **Compression**
Medium compression force required.
- ✗ **Acoustics**
Basic acoustic insulation.
- ✗ **Thermal conductivity**
0.25 w/mk.
- ✗ **Paint and stains**
Silicon oil could leave white traces on surfaces after prolonged use.
- ✗ **Resistance**
Aggressive detergents may cause damage to the gasket.
- ✗ **Colours**
Standard black, other colours may require different prices and MOQ.

Q-LON THE ADVANTAGES

A GLOBAL PARTNER



SCHLEGELGIESSE

MADE FOR THE FUTURE

GIESSE S.p.A.

Via Tubertini 1, 40054 Budrio (BO), Italy

Tel: +39 051 8850000 • Fax: +39 051 8850001 • email: info.it@schlegelgiesse.com

www.schlegelgiesse.com



U0894001 - 02/2020