

Fitting instructions: LP1504 DS acoustic, smoke and fire seal

The new Lorient LP1504DS seal offers the ultimate in acoustic, smoke and fire protection. The **unique design** means that whichever way around the product is installed, the acoustic and smoke sealing element can always be fitted in the correct place, thus maintaining the integrity of the acoustic and smoke seal at the hinge points - vital for life safety, and essential for meeting the requirements of Document E.

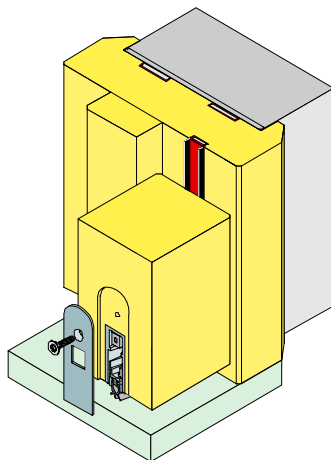
As well as excellent acoustic performance, the LP1504DS has plenty to offer:

- successfully tested in accordance with BS476: Pt 20/22 and Pt 31.1, and BS EN 1634-1:2000 for 30 minutes fire and smoke protection
- exceptional durability – tested to over 1,000,000 operating cycles
- available in a range of standard colours, with black fins - to blend or contrast with surroundings as required
- carries both BBA and CERTIFIRE (CF330/CF341) approvals

The LP1504DS can be fitted to either the door leaf or door frame, but we would recommend fitting it to the frame.

Hinge blades may vary in depth / width and therefore the LP1504DS seal may be positioned off set at a maximum of 23mm from the opening side of the door or frame to provide a continuous acoustic and smoke seal.

It is essential that one fin on the product remains continuous to ensure effective acoustic and smoke sealing performance.



The LP1504DS fitted into the frame of a door assembly, shown with the IS8010 si fitted in the threshold of the door.

All grooves should be of a suitable width and depth such that the seals do not stand proud of their surroundings. The LP1504DS is designed to fit in to a 15mm x 4mm nominal groove. Ensure the grooves are dry and free from dust and grease. Do not use oil or solvent based paint/ primers.

Measure and cut seals to length as required, using a hacksaw.

Remove self-adhesive backing and butt joint fit all seals to inside of door frame (or door).

Note:
Pinning is not recommended.

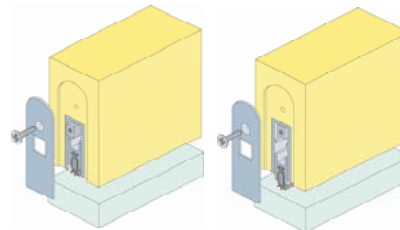
We recommend that, in line with good joinery practice, the edges of door leaves are given a 1° leading edge and chamfered on both edges.

Overpainting and varnishing is not recommended.

The importance of threshold sealing

Despite the recommendations of Document E to seal the threshold “where practical”, research shows that it is **essential** to do so in order to achieve the required 29dB Rw. Threshold sealing is also vital for providing protection against smoke.

This pack contains the IS8010 si automatic threshold seal, part of Lorient's Integrity™ Architectural Seals range. The IS8010 si has a high efficiency mechanism which lifts the seal clear of the floor as soon as the door is opened by a few millimetres – no power connection is required.



The IS8010 si in raised (left - door open) and lowered (right - door closed) positions.

The IS8010 si also has:

- a durable silicone gasket
- a light action, for ease of door opening, closing and latching
- internal fins which provide exceptional acoustic performance
- CERTIFIRE approval (CF136)
- exceptional durability - tested to over 1,000,000 operating cycles
- now also tested under the conditions of BS EN 1634-1:2000

Please refer to the separate detailed fitting instructions for the IS8010 si which are included in this pack.

Please note, when this product is fitted into a fire door, it is essential to use the intumescent cladding kit provided in this pack.



Everything you need
to meet the
requirements of



Pack E4

Doorset pack for
**acoustic, smoke and fire
containment**

Suitable for standard door size:
2040 x 926mm

(will fit door size up to 2100 x 935 mm)

Contains:

- LP1504DS: 5 x 1050mm lengths;
- IS8010 si: 1 x 935mm length (can be cut back to a minimum length of 835mm);
- Intumescent cladding kit for IS8010 si



CF330/CF341/CF136

DOC



This pack contains everything you need

to enable you to meet the requirements for door assemblies detailed in Approved Document E to the Building Regulations (England & Wales).

The revisions to Document E came into effect on 1 July 2003. From that date, all planning applications requiring Building Control approval, and work carried out under Building Notice procedures, have to comply with the revised Regulations.

Much of Document E relates to the acoustic performance of floors, ceilings and walls. However, for the first time, the acoustic performance of **door assemblies** in a number of situations is also specifically detailed. Everyone involved in the specification and installation of door assemblies will need to be certain they know what the requirements are, and what they need to do to ensure they comply with the new regulations.

This pack contains:

- **helpful information** about Document E and how it relates to door assemblies
- **perimeter and threshold seals** sufficient for one single leaf single swing doorset
- **clear instructions** to ensure the products can be fitted correctly
- information about the **relevant test evidence and accreditations** applicable to the products
- details of **technical support** available, and how to find out more information

The facts about Approved Document E: what the regulations say

The requirement reads:

"Dwelling-houses, flats and rooms for residential purposes, shall be designed and constructed in such a way that they provide reasonable resistance to sound from other parts of the same building and from adjoining buildings."

Door assemblies form an integral part of buildings, and while there must be gaps around the perimeter of a door for it to operate, these gaps also enable **fire, smoke and sound** to pass through. It is therefore **essential** to consider the acoustic sealing of door assemblies in order to comply with the requirements of Document E.

Document E goes on to give specific guidance for the acoustic performance of door assemblies. Clauses 2.26, 4.20 and 6.6 read:

*"Ensure that any door has **good perimeter sealing (including the threshold where practical)**, and a **minimum mass per unit area of 25kg/m² or a minimum sound reduction index of 29dB Rw** (measured according to BS EN ISO 140-3: 1995 and rated according to BS EN ISO 717-1:1997). The door should also satisfy the Requirements of Building Regulation Part B – Fire safety."*

A typical architectural door leaf with FD30 fire performance has a mass of only 18-22kg/m² – below the requirement stated in Approved Document E – and therefore it is essential to establish the acoustic performance of the doorset to at least 29dB Rw.

Document M

With the 2004 revision to Document M, access for all - not only disabled people - is high on the agenda, so doors must provide a minimal barrier to access, and are required to be much easier to operate. The DS seal has exceptionally low frictional resistance to everyday opening and closing forces - taking the requirements of Document M into account.

The importance of perimeter sealing

Without any seals fitted, a standard FD30 door leaf will only provide acoustic performance in the region of 22dB Rw. Even with a traditional brush smoke seal fitted, the performance will only be in the region of 23-24dB Rw. A seal with an elastomeric fin bypassing the hinge – such as the Lorient LP1504DS seal included in this pack – coupled with an effective threshold seal, has been proven to provide superior acoustic performance to meet and exceed the 29dB Rw requirement of Document E.

The importance of sealing at the hinge and latch points

Cutting away the acoustic and smoke seal at the hinge and latch points seriously detracts from the acoustic and smoke performance of the doorset. The LP1504DS seal in this pack has been designed with twin elastomeric fins. This means that one fin can be cut through so that ironmongery can be installed, while the other maintains the acoustic and smoke performance of the doorset.



Please turn over for more information about the LP1504DS seal and detailed fitting instructions.

Test evidence

The product combination included in this pack (LP1504DS and IS8010 si) has been acoustically tested in accordance with the standards stated in Document E. On a typical architectural solid core door, this product combination has been proven to give an acoustic performance of **31dB Rw**. (This is in excess of the 29dB Rw requirement of Document E to allow for a potential shortfall due to the difference between the ideal laboratory test conditions and on-site conditions.)

For further information about Lorient's acoustic test evidence, or a copy of any test reports for Lorient products, please call Lorient's Technical Helpline on +44 (0)1626 834252.

Third Party Accreditations

Lorient holds third party accreditations on many of its products. These provide independent verification and assurance of product quality. The LP1504DS holds both British Board of Agrément and CERTIFIRE (CF330/CF136) certificates. The IS8010 si holds CERTIFIRE (CF136). Copies of certificates are available on request from the Lorient Technical Department on +44 (0)1626 834252.

Lorient is quality assured under the disciplines of BS EN ISO 9001:2000.



BS EN ISO 9001:2000
Cert. No. Q6104

Lorient Polyproducts Ltd

Tel: +44 (0) 1626 834252
Fax: +44 (0)1626 833166
Sales: +44 (0)1626 837500
www.lorientuk.com