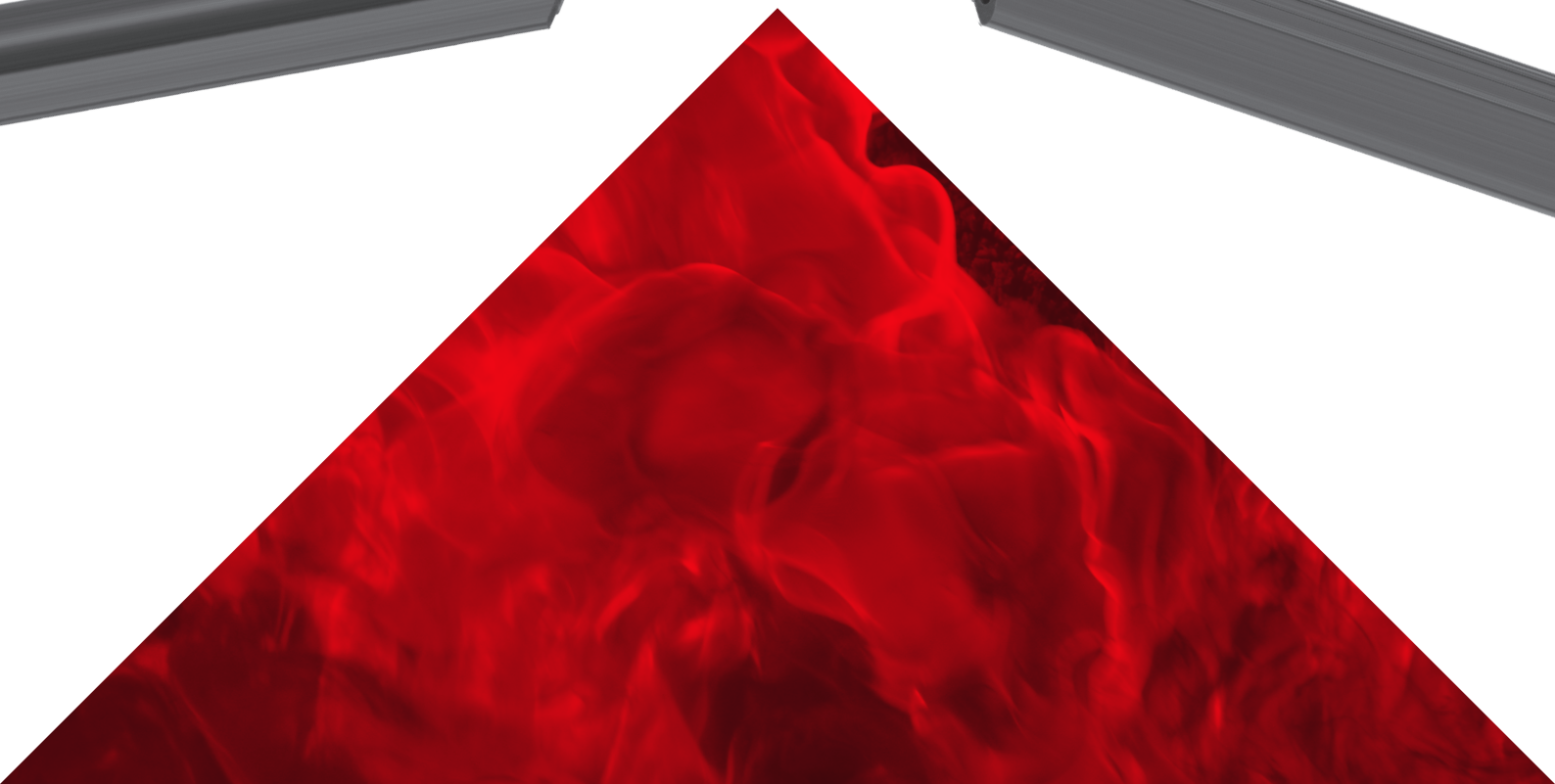
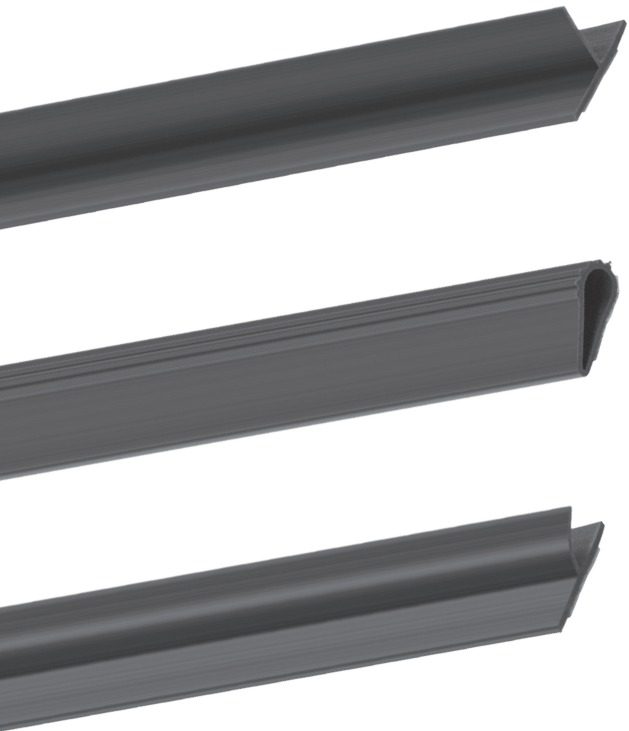


SELF-ADHESIVE FIRE & SMOKE SEALS



Fully Tested Fire
& Smoke Seals
For Doors



SELF-ADHESIVE FIRE & SMOKE SEALS

ENHANCED TESTING

Our ranges of self-adhesive fire & smoke seals have been used by door manufacturers for many years, particularly steel door manufacturers, and have become one of the most widely used within the industry. Never wanting to stand still, over the last few years we have not only increased the options we can offer, but more recently we have enhanced the depth of testing behind the products to at least meet, if not exceed, market requirements.

NEW TESTING - BI-DIRECTIONAL

Following successful independent third party testing, all our self-adhesive silicone fire & smoke seals can be installed on insulated and uninsulated steel and timber based fire resisting doorsets, regardless of the exposure direction. In accordance with BS EN 1634-1.

We had noticed a call within the industry for fire evidence from both sides, so moved quickly to obtain this evidence. Now, whether the door opens towards or away from the risk of fire, our self-adhesive silicone seals can be specified with confidence.



NEW TESTING - UL94 (SELF-EXTINGUISHING)

The silicone rubber used to manufacture all our self-adhesive silicone fire & smoke seals have now been independently tested to the popular flammability standard, UL94. This testing was carried out to, in particular, prove the self-extinguishing properties of our silicone.

The silicone performed exceptionally and was classified as V-0, best classification, meaning the tested material did not flame for more than 10 seconds after being burnt. In fact, in most cases flaming was much less than 10 seconds. A copy of test report 430491 is available upon request.



NEW TESTING - MATERIAL TESTS (TEARDROP RANGE ONLY)

Due to customer request, particularly those operating in the transport industry, our Teardrop seals have undergone a series of Material Tests, also referred to as 'Burn Tests'. Samples of the seal were tested, burnt, to establish the following

- Oxygen Index** To determine the amount of oxygen required to support sustained ignition. Tested in accordance with BS EN ISO 4589-2: 1999.
- Toxicity** Measuring the fumes produced from a material in a fire situation. Tested in accordance with the procedure specified in NF X 70-100-1: 2006 & NF X 70-100-2: 2006.
- Smoke Density** To gain an indication of visibility through any smoke emitted from the burning material. Tested in accordance with the principles of BS 6853: 1999, incorporating amendment No. 1, Annex D.8.3 (Withdrawn) / LUL S1085 Attachment B.5.

All tests were carried out by Exova Warringtonfire, and copies of detailed test reports are available upon request.


Exova
Warringtonfire

Description of Test Specimens


The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

Generic type	Silicone teardrop door seal product
Product reference	120079 3000 4000
Name of manufacturer	Zeno Seal Systems Ltd
Thickness	Variable profiles: Section used for testing was taken from profile reference '1885°' and had a wall thickness of 0.5mm (determined by Exova Warringtonfire)
Colour	Black (determined by Exova Warringtonfire)
Colour reference	Black (Observed by Exova Warringtonfire)
Flame retardant status	See table 1 below
Brief description of manufacturing process	See table 1 below


"1885°"



"3885°"



"4885°"



Note 1: The sponsor was unwilling to provide this information.

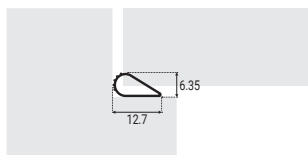
SELF-ADHESIVE FIRE & SMOKE SEALS

TEARDROP TYPE - SILICONE

Our Teardrop range of silicone rubber seals are the original, and most popular of our self-adhesive fire & smoke seals. All are the shape of a teardrop, hence the name, with three sizes available to suit varying leaf to frame gaps. Colour options are black, white, dark bronze and light grey (388S is available in dark bronze only). They are all supplied with double sided backed PSA (pressure sensitive adhesive) tape.

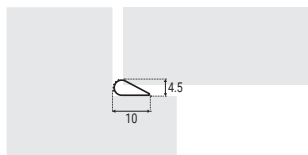


SIZES



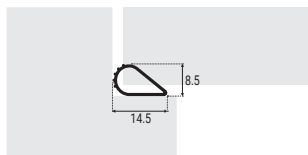
188S STANDARD SILICONE TEARDROP SEAL

Size	6.35mm thick x 12.7mm wide
Frame gap	To suit 3mm - 3.5mm gaps
Coil length	91.4 metres (300 feet)



488S MINI SILICONE TEARDROP SEAL

Size	4.5mm thick x 10mm wide
Frame gap	To suit 1.8mm - 2.5mm gaps
Coil length	91.4 metres (300 feet)



388S LARGE SILICONE TEARDROP SEAL

Size	8.5mm thick x 14.5mm wide
Frame gap	To suit 3.5mm - 4.5mm gaps
Coil length	61 metres (200 feet)



TESTING



FIRE

BS EN 1634-1. Assessment report 193454 issue 6 available upon request.
Steel Doors - 240 minutes. Insulated and uninsulated. Bi-directional.
Timber Doors - 60 minutes. Insulated and uninsulated. Bi-directional.

BS 476-22. Assessment report 135275 issue 3 available upon request.
Steel Doors - 240 minutes. Insulated and uninsulated.
Timber Doors - 60 minutes. Insulated and uninsulated.



COLD SMOKE

Our silicone Teardrop seals fully meet the requirements of Approved Document B of the Building Regulations when tested in accordance with BS 476-31.1. Reports 134853 and 135275 issue 3 available upon request.
BS EN 1634-3. Assessment report 193454 issue 6 available upon request.



SOUND

BS EN ISO 140-3. Test report 132-1 available upon request.
188S achieved 31 Rw and 388S achieved 36 Rw when used in conjunction with our 564A threshold.

All the features at a glance:

- Available in three sizes.
- To suit a range of frame gaps from 1.8mm to 4.5mm.
- A range of four colours (black, dark bronze, light grey, and white) with the exception of 388S being dark bronze only.
- Successfully **bi-directional** fire tested. Suitable for use on doors of both steel or timber construction.
- New UL94 testing, classified V-O.
- Cold smoke seals.
- Sound tested to achieve a rating of 31Rw (36 Rw for 388S) when used with our 564A threshold.

SELF-ADHESIVE FIRE & SMOKE SEALS

FIN TYPE - SILICONE

Developed initially to overcome the problem of sealing the meeting stile of a pair of fire rated steel doors, our silicone Fin seal range has grown in popularity as a typical fire & smoke frame seal also. The range has four profiles to suit various leaf to frame gaps, with black being the standard finish. They are all supplied with double sided backed PSA (pressure sensitive adhesive) tape.



1771S



1772S

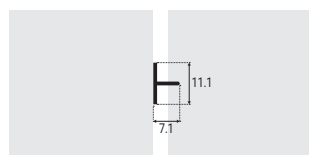


1773S



1777S

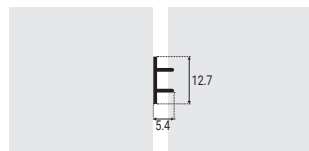
SIZES



1771S-BLK 90 DEGREE TEE FIN

For astragal and meeting stile applications.

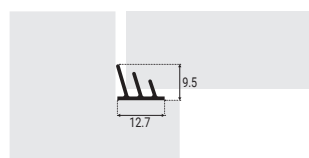
Size	7.1mm high x 11.1mm wide
Frame gap	To suit 2.5mm - 5mm gaps
Coil length	61 metres (200 feet)



1772S-BLK 90 DEGREE TWIN TEE FIN

For astragal and meeting stile applications.

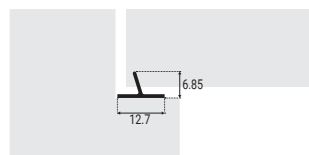
Size	5.4mm high x 12.7mm wide
Frame gap	To suit 2.5mm - 4mm gaps
Coil length	61 metres (200 feet)



1773S-BLK 75 DEGREE TRIPLE TEE FIN

Perimeter seal for frame head and sides.

Size	9.5mm high x 12.7mm wide
Frame gap	To suit 3mm - 6mm gaps
Coil length	61 metres (200 feet)



1777S-BLK 75 DEGREE SINGLE TEE FIN

Perimeter seal for frame head and sides.

Size	6.85mm high x 12.7mm wide
Frame gap	To suit 2mm - 4mm gaps
Coil length	61 metres (200 feet)



TESTING



FIRE

BS EN 1634-1. Assessment report 193454 issue 6 available upon request.
Steel Doors - 240 minutes. Insulated and uninsulated. Bi-directional.
Timber Doors - 60 minutes. Insulated and uninsulated. Bi-directional.



COLD SMOKE

Our silicone Fin seals fully meet the requirements of Approved Document B of the Building Regulations when tested in accordance with BS EN 1634-3. Assessment report 193454 issue 6 available upon request.

All the features at a glance:

- Available in four profiles.
- To suit a range of frame gaps from 2mm to 6mm.
- Available in black only.
- Successfully **bi-directional** fire tested. Suitable for use on doors of both steel or timber construction.
- New UL94 testing, classified V-O.
- Cold smoke seals.

SELF-ADHESIVE FIRE & SMOKE SEALS

TEARDROP TYPE - INTUMESCENT

In addition to our standard silicone Teardrop seals, we also offer the 188 and 488 formulated with a proprietary chemistry using silicone and intumescent. These 'FS' versions of our two most popular Teardrop seals have the added benefit of intumescent (expanding) when exposed to heat, helping to fill voids which may be created during a fire situation.

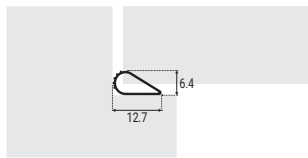


188FS



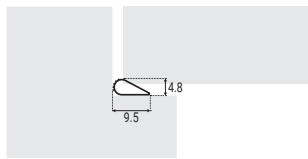
488FS

SIZES



188FS STANDARD INTUMESCENT TEARDROP SEAL

Size	6.4mm thick x 12.7mm wide
Frame gap	To suit 3.5mm gap
Coil length	100 metre coil



488FS MINI INTUMESCENT TEARDROP SEAL

Size	4.8mm thick x 9.5mm wide
Frame gap	To suit 2.5mm gap
Coil length	100 metre coil



TESTING



FIRE

Following successful testing, we now have an assessment report which covers our 188FS and 488FS intumescent Teardrop frame seals for use on inward opening fire rated steel doorsets. This new successful testing means that both seals can be confidently installed on inward opening steel doorsets for a duration up to 60 minutes, integrity only, to BS EN 1634-1.



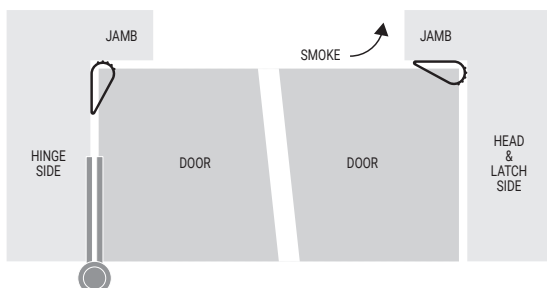
COLD SMOKE

188FS and 488FS fully meet the requirements of Approved Document B of the Building Regulations when tested in accordance with BS EN 1634-3. Reports available upon request.

All the features at a glance:

- Available in two sizes.
- To suit a range of frame gaps from 2.5mm to 3.5mm.
- Available in black only.
- Suitable for use on inward opening steel fire rated doorsets.
- Cold smoke seals.

SELF-ADHESIVE SEALS INSTALLATION INSTRUCTIONS - KEY POINTS



1. Remove approximately 1 metre of paper backing from the seal being careful not to touch with dirty or sweaty hands, or drag adhesive in dust or dirt.
2. With stabiliser flange pointing away from the stop, position the seal in the rabbet of the stop and press in place. Without stretching the seal, press each inch of length to activate all of the adhesive to the frame.
3. Remove the next metre of paper backing and repeat Step 2 until the entire length for head or jamb is installed. Do not install as one continuous piece; cut material at corners where head and jambs meet.
4. The adhesive is designed to gradually set to a high peel strength so that immediate removal and resetting can be done if an error is made in the initial placement. Full set is reached in approximately 24 hours.

SPECIALIST ARCHITECTURAL
HARDWARE SUPPLIERS TO
THE DOOR OPENINGS INDUSTRY



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Safety Assured



Cert No. 51091



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