INTUMESCENT FIRE SEALS - Installation Guide

Introduction

The purpose of this document is to give guidance to approved contractors and suppliers who are engaged in the fire stopping of fire rated structures using Astro STRIP. All Timber fire door assemblies must be fire stopped to prevent the passage of fire, smoke and hot gases. The key points for passive fire protection products are:

- Prevent the spread of fire, smoke and hot gases through a building by containing it in the compartment of origin
- Maintain the integrity of escape routes from a building.
- Reduce loss or damage to property from the effect of fire and smoke.
- Maintain pressure differential between compartments and ventilation channels.

THE ASTRO STRIP SYSTEM

Intumescent Fire and smoke seals for fire door assemblies

An Astro intumescent graphite based fireseal contained within a PVC sleeve fitted into a rebate to either the leaves or the frame will, in the event of a fire, expand (intumesce) to many times its original volume and seal the gap around the door to provide a safe and effective barrier against the passage of fire, smoke and hot gases.

Astroflame Intumescent Fireseals are available with or without a cold smoke seal in the form of a nylon pile or rubber seal. Astroflame smokeseals provide a permanent barrier to smoke, acoustic and thermal applications and are particularly important as smoke travels faster and further than fire itself.

All Astro seals are supplied with a self adhesive backing tape as standard to facilitate quick and easy fitting. The seals are available in a choice of colours to suit your requirements or blend with decor.

Passed at BS 476 part 22 & 31 for 30 or 60 minutes rating Certifire approval CF 276
Smoke seal to 100,000 cycle test
NHBC Type Approval.

Installation

Astrostrip is passed and certified for use in single and double door assemblies (single and double action), and can provide fire and smoke resistance in excess of either half an hour or one hour.

If your fire door or frame is not pre-grooved check the door manufacturer's data and test sheets to establish the size and quantity of intumescent seals required.

You should also note the tested position of the seals and whether any additional protection is required around the particularly vulnerable areas of the lock and hinges (Astro Protecta for hinges and locks).

Rebate the door or door frame to accommodate the chosen seal which should be fitted so that the PVC sleeve finishes flush with the face of the timber. (An allowance in the rebate width may be necessary to allow for timber shrinkage or for paint/stains, so we recommended grooving 3% greater than the chosen seal size).

We recommend that the gap between door and frame should be no greater that 4mm. To fix remove the release paper from the self-adhesive backing tape and push the seal firmly into the rebate along its full length. For alternate fixing methods use Astro intumescent mastic or steel pins.

If the door or frame is to be painted/stained care should be taken to ensure the paint/stain does not come into contact with the brush pile on the Fire & Smokeseal. Periodically check the intumescent seal to confirm the integrity. All smoke seals are interchangeable to allow for change of uses within the building.

Density: 1025 Kg/m$^3$
Flexural strength: —
Tensile strength: 2.8
Moisture content: 3% (max.)
Expansion (under 50 psi load): 85%
Free expansion ratio (400°C 15min): 20:1
Activation temperature under 50psi load: 200°C
Pressure generation expansion @ 400°C: 10 Bar

Compliance

Astro strip is manufactured in the EU, meeting the highest quality standard in compliance with ISO EN 9001:2000. For fire test certification contact Astroflame Fireseals Technical Department.

Fire Test or Assessment Reports

Certifire approval CF 276
Warrington Fire Research: Global Assesment C100767
C82223, C81825.
Trada/Chiltern: RF40523, RF95041, RF95079, RF95080

Storage and disposal

Astro STRIP should be stored indoors
No shelf life is given as the strips will not deteriorate in storage.
Disposal - please refer to COSHH sheet

For additional testing, certification or technical information please contact ASTROFLAME FIRESEALS LTD.

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