Terrain Firetrap

Fire protection for above ground drainage systems
The best fire rating available for the drainage stack

As part of the on-going development of Terrain drainage systems, we have developed a comprehensive range of passive fire protection products for use with Terrain PVC soil and waste, Terrain Fuze and Terrain Acoustic dB12. These products will enable secure specification of Terrain drainage systems with the confidence of conforming to the requirements of Part B Building Regulations. In addition all products comply with BS 476 Part 20 and BS EN 1366-3.

**The Terrain Firetrap range comprises:**

**Terrain Firetrap Sleeves**
- Ideal for Terrain Fuze stacks
- Up to 4 hour fire protection
- Quick to install in new build and retro-fit
- Protects compartment above and below slab

**Terrain Firetrap Collars**
- Suitable for all Terrain drainage systems
- Can be surface mounted or built in
- Up to 2 hour fire protection

In addition, independent testing has been carried out on both Firetrap Sleeves and Firetrap Collars in typical floor installations.
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Firetrap Sleeves

The Terrain Firetrap Sleeve is a cost effective product for the fire stopping of pipe penetrations whilst maintaining similar thermal and acoustic properties as standard mineral fibre insulation.

Terrain Firetrap Sleeve was developed with ease of installation in mind. The sleeve can be quickly and simply fitted onto the pipe and slid into the penetration ensuring that there are no air gaps around the sleeves by filling with mortar or mastic. In a fire situation the sleeve expands to fill the available space (15mm max) between the pipe and the penetration and will crush and close off plastic drainage pipes. The pipe forms a solid char preventing the passage of fire and smoke to the adjacent compartment.

Applications

Terrain Fuze, Terrain Acoustic dB12 and Terrain PVC soil and waste above ground drainage through:
- Concrete, masonry or plasterboard partitions
- Concrete floor constructions

Benefits

- Up to 4 Hour Fire Rating to BS 476 Part 20, BS EN 1366-3
- Protects pipe above and below the slab
- Cost effective
- One sleeve can replace two collars
- Easy installation
- Don’t have to drill slab
- No need for mechanical fixings
- No mastic is required, providing close fit
- Easily cut to size to minimise wastage
- Simple to install without special tools or skills
- Will accept hole irregularities of up to 15mm
- Can be retro-fitted
- Offers excellent acoustic insulation
- Maintains the thermal insulation of the pipe through the slab or wall penetration
- Maintains vapour seal of existing insulation
- Allows for thermal movement of pipe
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Firetrap Collars - for Terrain PVC soil and waste, Terrain Fuze and Terrain Acoustic dB12

Terrain Firetrap Collars have been specifically designed to re-instate the fire resistance of a wall or floor which has been penetrated by services such as Terrain PVC, Terrain Fuze or Terrain Acoustic dB12.

Manufactured in steel, each fire collar contains an internal lining of intumescent graphite impregnated organic polymer. Anchoring hooks are also supplied.

The collars will seal pipes from 50mm to 315mm diameter and can be face fixed or set-in to a wall or ceiling structure. They are suitable for use on concrete, masonry and plasterboard partitions.

They have a 2 hour fire rating and feature mounting tabs for quick and easy installation.

Applications

For Terrain PVC, Terrain Fuze and Terrain Acoustic dB12 above ground drainage through:
- Concrete, masonry or plasterboard partitions
- Concrete floor construction
- Fire-proof concrete
- Brickwork floors and walls

Features

- 2 Hour fire rating
- Powder coated steel sleeve
- Can be surface mounted or built in
- Mounting tabs for quick and easy installation
- Seals against smoke, toxic gases, flames and heat
- Can be installed in a recessed area to minimize overall dimensions
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Collars will seal pipes from 40mm to 315mm diameter and can be face fixed or set-in to a wall or ceiling structure.
Fire protection for vertical Terrain Drainage Pipework in a NON fire rated duct

- Firesleeve scolloped out locally for 50mm pipe entry to sit flush on floor if required
- Note: Insulation may be required to meet standard building requirements and regulations
- Basin
- WC
- Bath/Shower

Terrain Fuze
- Terrain insulated Firetrap Fire Sleeve
- 4 hour rating top and bottom of slab
- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

Fire rated wall or floor
- Mastic seal around

Note: Metal brackets to be installed to support pipework accordingly
- Brackets not shown

Plasterboard

Note: Insulation may be required to meet standard building requirements and regulations

- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

- Fire rated wall or floor

- Mastic seal around

- Firesleeve scolloped out locally for 50mm pipe entry to sit flush on floor if required

- Note: Insulation may be required to meet standard building requirements and regulations

- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

- Fire rated wall or floor

- Mastic seal around

- Firesleeve scolloped out locally for 50mm pipe entry to sit flush on floor if required

- Note: Insulation may be required to meet standard building requirements and regulations

- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

- Fire rated wall or floor

- Mastic seal around

- Firesleeve scolloped out locally for 50mm pipe entry to sit flush on floor if required

- Note: Insulation may be required to meet standard building requirements and regulations

- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

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- Mastic seal around

- Firesleeve scolloped out locally for 50mm pipe entry to sit flush on floor if required

- Note: Insulation may be required to meet standard building requirements and regulations

- Maximum allowable gap around fire sleeve to be 15mm all round. Above this must be filled with Firestop compound or concrete

- Fire rated wall or floor

- Mastic seal around
Installation - Firetrap Sleeves

To maintain the fire rated compartment between floor levels where Terrain drainage penetrates the slab, an insulated fire sleeve should be installed. The fire sleeve should be installed through the entire slab penetration. Where possible a maximum of 25mm of sleeve can be left protruding out of the slab both at floor level and the underside of the slab. If, due to low level connections at slab level, this method is not possible then two alternative methods can be used;

1. Maintain the 25mm protrusion but scollop out the sleeve locally to accommodate the low level connection.
2. Cut the sleeve flush with the slab/soffit level.

Where possible the sleeve shall be installed by sliding it over the pipe to be protected prior to installation and once the pipe is installed the sleeve shall be slid in to its finish position. Ensure that it doesn’t slide out of position with either mortar or mastic.

If this is not possible then the sleeve can be slit along its length and fitted around pipes already in-situ. If this method is used then foil tape shall be used to join the two mating faces.

The sleeve can be fitted into pre-cast holes that are to be made good. The material used to make good can be poured into the shuttered hole and the material can be allowed to flow directly onto the sleeve outer diameter which is foil protected.

Alternatively the sleeve can be fitted into a core drilled hole provided the hole is no more than 15mm larger than the outside diameter of the sleeve. If this method is used then a fire rated mastic should be used to protect the gap between the sleeve outside diameter and the slab.

If acoustic insulation is used on the main body of the stack then this insulation can be jointed to the fire sleeve by using foil tape at the mating faces.
Installation - Firetrap Collars for Terrain PVC, Terrain Fuze and Terrain Acoustic dB12

1. How to install the fire collar

Drill a hole through the wall/floor using a corer and crown bit in required size. Install the plastic pipe. Seal the gap between the hole and the pipe. If a wide gap exists, the space must be sealed using fire-proof mortar or alternatively, an intumescent sealing agent.

2. Pipe cleaning

A sealing effect is achieved with the expansion of the intumescent material during the fire which completely seals the plastic pipes. Mortar residue and dirt will impede this sealing effect, so cleaning of the pipes is essential at the point where the fire collar is fitted.

3. Closure and seal against smoke and gas

The intumescent material will seal the gap when activated by high temperature and fire. To protect against the spread of smoke and gas within the first few minutes the remaining gap between the plastic pipe and the opening must be sealed on one side of the wall using an appropriate sealing agent.

4. Closing the fire collar

No tools, pins or screws are required to lock the collar in place. Simply position the fire collar around the plastic pipe and press firmly to tighten the closing device until the mechanism snaps into place. Ensure the collar is positioned correctly to enable the anchoring hooks to be fixed.

5. Locking the fire collar

The fire collar can only protect against fire if it is adequately fixed in place. The use of anchoring devices is recommended to secure the collar in place.

6. Recessed installation

Ensuring that the hole is sufficiently wide enough to accommodate the external diameter of the fire collar, insert the fire collar into the opening. The fire collar must be installed flush with the lower surface when installed at ceiling level. Insert one collar on each side in the case of a wall installation, if a gap remains around the installed collar, this must be filled with mortar.
Standards and Certification

Steps must be taken that comply with the provisions of the National certificates issued for the product when a fire-proof seal is made for the passage of pipes using fire-proof intumescent collars.

Terrain recommends referring to the product’s certificates to verify the limitations with regards to the size of the opening, type and thickness of the wall or floor and the maximum diameter of the pipes. Local Fire Regulations should always be consulted in accordance with Building Regulations Part B.

Firetrap Sleeves for Terrain Fuze

Fire Testing

Terrain Firetrap Sleeves are fire tested in accordance with BS 476: Part 20: 1987, BS EN 1366-3. Constructions covered - Plasterboard partition and Solid walls and floors.

Chiltern International Fire testing reports available on request.

Acoustic Testing

Firetrap Sleeves were acoustically tested in a plasterboard partition system under UKAS conditions in accordance with BS EN ISO 140-3:1995 and BS EN ISO 717-1:1997 to be fixed.

Firetrap Collars for Terrain Fuze and Terrain Acoustic dB12

- Tested to BS 476 Part 20.
- IFC certificate number: FS453/07

Certificate available on request.
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