

CI/SfB		(29)	(K2)
CAW	P10		
Uniclas	JP10 L68114		
January 2014			

# B270

## High Strength Structural Compound

### KEY BENEFITS SUMMARY

- Certified to BS 476 Pt 20/22, EN 1366-3
- Provides an effective barrier to the spread of smoke and fire for up to 4 hours
- Load bearing up to 2.5 kN/m<sup>2</sup> (UDL), unsupported spans up to 1800 mm
- Rapid setting, zero shrinkage formulation - can be used as pourable or trowel grade
- Provides an effective means of support to dampers/ductwork

### PRODUCT INFORMATION

#### Description

Nullifire B270 High Strength Structural Compound is a single part gypsum-based compound providing up to 4 hours fire resistance.

#### Usage / Purpose

Nullifire B270 High Strength Structural Compound is used to stop the spread of smoke and fire along services that pass through compartment walls and floors, whilst providing an unsupported load bearing capacity up to 2.5 kN/m<sup>2</sup> (UDL), up to a 1800 mm span at minimum 100 mm depth, to meet the requirements of BS 6399-1:1996. The system also provides thermal, acoustic and air sealing performance.

B270 is suitable for the following service penetrations; single and bunched cables, cable trays, cable ladders, trunking, steel and copper pipes, unsupported multiple ducting/damper penetrations, PVC and uPVC pipes. Typical areas of use include health and leisure facilities, schools, universities, commercial, retail and industrial buildings.

#### LIMITATIONS

For spans greater than 1800 mm or seals that require a UDL in excess of 2.5 kN/m<sup>2</sup> please contact Technical Services for design support.

#### Packaging

20 kg bag

#### Availability

Direct from Nullifire (see back of leaflet for address and telephone details).

#### USAGE GUIDELINES

##### Necessary Tools

Gloves and eye protection, clean bucket, mixing paddle, trowel, water.

##### Preparation

- Clean all surfaces of loose particles, moisture, oils, grease and corrosive materials.
- Install non-combustible damming board/ shuttering to bottom of opening, measuring the required depth. The shuttering must be capable of supporting the wet weight of the compound
- Porous contact surfaces should be dampened with water prior to the installation of B270.
- If plastic services are evident B300 Pipe Wraps or B150 Pipe Collars should be used.

##### Preparing Formwork

Structural support should be installed to secure the formwork/shuttering while the pour is made, this can be in various forms from angles fixed around the perimeter to supporting the formwork/shuttering or from an "Acrow Prop" from below during the pour. It is best to make sure that all formwork/shuttering is able to support the wet weight of the product at all times. The installer must satisfy themselves that the formwork can support the loads.

##### For permanent formwork:

- Cut and fix a plain mineral fibre batt 50 mm thick around the services and to the edges of the opening. The batt should be friction fitted to ensure a tight fit.
- The batt should be installed below the level of the surrounding floor to ensure sufficient depth is left for the B270 Compound. Small gaps around services may be filled with loose mineral fibre or a stiff mix of B270 Compound to reduce leakage of the B270 Compound when poured.

##### For temporary formwork:

- Fix suitable formwork such as timber or plywood around all services and up to the edge of the opening.
- Formwork should be fixed below the floor level allowing sufficient depth for the B270 Compound. Holes and gaps in the formwork should be sealed using mineral fibre, plastic sheet or other suitable methods.

##### Mixing

- B270 can be mixed preferably by mechanical paddle or manually if required. Measure out the correct amount of clean water into a clean container to achieve the desired consistency (B270 : water ratio):  
Pourable Mix ratio of 3 : 1  
Trowelable Mix ratio of 4 : 1
- Gradually add the B270 stirring continually. Continue mixing until the B270 is mixed to a smooth even consistency.
- Mix only enough material sufficient for use within the recommended pot life (10-20 minutes). Pot life and set times will be reduced for lower water content and higher temperatures.
- Installation should not be carried out when temperatures are above 35°C. Setting times are normally between 30 and 90 minutes.

**Warning:** Do not attempt to extend working time by remixing with additional water once the mortar has started to set, as this will interfere with the setting process. Always mix in clean buckets. Using dirty buckets containing remains of mortar from earlier mixes may reduce working time.

##### Installation - Walls

With mineral fibre batt:

- Fix a mineral fibre batt of 50 or 60 mm thickness around the services within the depth of the wall. The batt should be positioned at the centre of wall thickness allowing enough space for the correct thickness of B270 Compound on either side of the batt.
- Shuttering should be fixed either side of the wall to allow correct depth of B270 Compound. A space should be left at the top of the shuttering to allow the B270 Compound to be poured into the void.



# B270

Nullifire - a brand of Tremco illbruck Ltd  
 Torrington Avenue  
 Coventry, West Midlands CV4 9TJ  
 Tel: 02476 855000  
 Fax: 02476 469547  
 Email: protect@nullifire.com  
 Website: www.nullifire.co.uk

## TECHNICAL PROPERTIES

Property	Test Method	Result
Density (wet cast)		1750-1900 gg/m <sup>3</sup>
Loadbearing		2.5k N/m <sup>2</sup> UDL
Max Unsupported Span	minimum 100 mm depth	1800 mm
Flexural Strength	EN 13279	4 - 5 N/mm <sup>2</sup>
Compressive Strength	BS 1881	13 - 17 N/mm <sup>2</sup>
Thermal Conductivity	BS 874	0.2 W/m°C

Without mineral fibre batt:

- Install shuttering on both sides of the wall ensuring the void is the correct depth for the B270 Compound to meet the fire rating. A space should be left at the top of the shuttering to allow the B270 Compound to be poured into the void.
- When using a stiff mix for trowelling shuttering may not be required for small openings. It may however be necessary to build up layers of 150 mm allowing each layer to start curing before the next is installed.

### Installation - Floors

- Mix as per instructions and pour onto the formwork. Level off to the required thickness and allow to set. In some cases it may be practical to pour an initial layer of 10 mm thickness and allow this to set for approximately 1 hour before pouring the remaining B270 Compound to the required final thickness.
- The Compound is normally finished flush with the surface of the concrete slab. Once the B270 Compound has set temporary formwork should be removed.

**Warning:** Building up the seal in several operations with the individual layers being allowed to set will result in a weak laminated structure with severely reduced load bearing capability.

### Coverage

Approximate volume of compound required per m<sup>2</sup>:

Seal thickness 100 mm  
 No. of bags 6

### Maintenance

No maintenance required after installation. Routine inspection recommended to ensure no damage.

### Storage

Store between +5°C and +30°C in dry conditions.

### Shelf Life

At least 12 months when stored as recommended.

### Health & Safety Precautions

Product Safety Data Sheet must be read and understood before use.

### Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 02476 855000.

### Guarantee / Warranty

This information is offered in good faith but without guarantee or liability. In cases of doubt, users should consult with relevant authority.

Information given herein is supplied for your guidance only and is based upon the results of controlled tests and experience obtained in the application of the product referred to by Nullifire.

As the supplier only, Nullifire has no control over the method or conditions of application of the product and consequently no warranties expressed or implied are intended to be given as to the coverage or performance of the products mentioned or referred to herein and no liability will be excepted for any loss, damage or physical injury resulting from the use or application of the information, data or products mentioned or referred to herein.

## PERFORMANCE

FIRE PERFORMANCE: Tested in accordance with EN 1366-3 and BS 476 Pt 20 Up to 4 hours

ACOUSTIC PERFORMANCE: Tested in accordance with BS EN ISO 140-3:1995

Substrate	Service Type	Integrity (minutes)	Insulation (minutes)
Masonry Wall or Floor (Max unsupported span 1800 mm)	Blank Seal	240	240
	25 mm steel pipe	240	180
	42 mm steel pipe	240	90
	60.3 mm steel pipe	240	30
	108 mm steel pipe	240	30
	Cable tray 3 x 35 mm cables	240	30
	Cable tray 19 x 13 mm and 1 x 55 mm cables	60	30
	Duct with Damper 1000 mm x 1000 mm	240	240