

Nullifire B220 - Fire Stop Compound

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1. PRODUCT DESCRIPTION

Nullifire B220 Fire Stop Compound is a mixture of inorganic reinforcing binders, lightweight aggregates, fillers and special additives formulated to provide the optimum combination of workability, strength and fire resistance.

It is used for the sealing of voids around penetrating services where they pass through holes in compartment walls and floors.

B220 is load bearing to light foot traffic in accordance with the guidelines detailed in these application instructions. If increased load bearing capability is required, B270 High Strength Fire Stop Compound should be used.

2. INSTALLATION CHECKLIST

- Ensure substrate is clean, dry and stable.
- If plastic services are evident B300 Pipe Wraps or B150 Pipe Collars should be used.
- Ensure width of wall is sufficient to take the depth of B220 Fire Stop Compound.
- Ensure mineral fibre Batt or suitable formwork are available.
- Provide supply of clean water for mixing.
- Remove insulation from the services where B220 Fire Stop Compound is to be installed.

3. PREPARTATION

All contact faces of the opening and services should be cleaned to remove dust, dirt and surface contamination. Porous contact surfaces should be dampened with water prior to the installation of the B220 Compound.

4. INSTALLATION INSTRUCTIONS

For permanent formwork:

Cut and fix a plain mineral fibre Batt of 50mm thickness around the services and to the edges of the opening. The Batt should be friction fitted where possible 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 B220 Compound. Small gaps around services may be filled with loose mineral fibre or a stiff mix of B220 Compound to reduce leakage of the B220 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 B220 Compound. Holes and gaps in the formwork should be sealed using mineral fibre, plastic sheet or other suitable methods.

5. MIXING

B220 can be mixed preferably by mechanical paddle or manually if required.

Measure out the correct amount of clean water into a clean container and gradually add the B220 stirring continually. Continue mixing until the B220 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. Please note however that installation should not be carried out when temperatures are above 35°C. Setting times are normally between 30 and 90 minutes.

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6. WALLS

With Mineral Fibre Batt:

Fix a mineral fibre Batt of 50 or 60mm 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 B220 Compound on either side of the Batt. Shuttering should be fixed either side of the wall to allow correct depth of B220 Compound. A space should be left at the top of the shuttering to allow the B220 Compound to be poured into the void.

Without Mineral Fibre Batt:

Install shuttering on both sides of the wall ensuring the void is the correct depth for the B220 Compound to meet the fire rating. A space should be left at the top of the shuttering to allow the B220 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 150mm allowing each layer to start curing before the next is installed.

7. FLOORS

Mix B220 Compound as per instruction 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 10mm thickness and allow this to set for approximately 1hour before pouring the remaining B220 Compound to the required final thickness. The Compound is normally finished flush with the surface of the concrete slab.

Once the B220 Compound has set temporary formwork should be removed.

Tools and equipment should be cleaned with water immediately after use.

Estimating Note:

At a depth of 50mm, 2 x 20kg bags of B220 Compound will be required to fill a clear space of 1m².

8. FIRE PERFORMANCE

Thickness requirements:

Up to 2 Hours Integrity

Floor: 75mm B220

Or 50mm B220 + 50mm thick mineral fibre Batt.

Wall: 100mm B220

Or 25mm B220 either side of 50mm thick mineral fibre Batt.

Up to 4 Hours Integrity

Floor: 100mm B220

Or 50mm B220 + 50mm thickness mineral fibre Batt.

Wall: 100mm B220

Or 25mm B220 either side of 50mm thick mineral fibre Batt.

Above figures relate to integrity only. For specific insulation values refer to Nullifire Technical Desk on +44 (0) 24 76855000.

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9. CRUSHING STRENGTH

B220:Water Ratio (By vol.)	Typical Values (N/mm ²)	
	24 hrs	28 days
2 : 1	2.5	5.0
2 ¹ / ₂ :1	4.2	8.3
3 : 1	5.6	11.0

10. FLEXURAL STRENGTH

1 – 3 N/mm²

11. LOAD BEARING CAPABILITY

Span/Depth Ratio of seal (unreinforced)	Failure Load After 28 Days (Tonnes)	
	Two way Spanning	One way Spanning
4:1	5.0	2.5
8:1	2.7	1.4

In clear areas subject to foot traffic or similar loads the following recommendations are made:

Depth of seal (mm)	Maximum single span without reinforcement (mm)
100	400
150	750

For larger openings or long slot voids refer to the Nullifire Technical Desk on

B220 FIRE STOP COMPOUND

+44 (0) 24 76855000.

12. STORAGE

B220 Compound must be stored in dry conditions, clear of the ground and not removed from its polythene packaging until required. In sealed bags it is not affected by temperature and has a minimum shelf life of 12 months.

13. HOW TO ORDER

B220 is supplied in bags of 20kgs. In the U.K., B220 is stocked at Coventry. In other countries, B220 can be purchased through your nearest distributor, whose details can be obtained from Nullifire or from the Web site on <http://www.nullifire.com>.

14. HEALTH AND SAFETY

See separate Material Safety Data Sheet.

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