

FR230

Intucompound Fire Mortar

19-02-2025 / V 1

Description

FR230 Intucompound is a high quality gypsum based fire mortar containing Optifire+ unique traceability identifier. It provides a safe working platform for loads up to 2.5 kN/m² when installed in full accordance to our recommendations.



Features and Benefits

- Up to 4 hours fire resistance - Tested to EN 1366-3 and EN 1366-4
- Up to 1.21 m² without framework requirement
- Load and impact capability after 50 hours only
- Flows easily around and behind services
- Rapid setting, zero shrinkage formulation
- Can be used as pourable or trowel grade
- Acoustic and thermal performance
- Optifire®+ unique traceability identifier

Usage Purpose

FR230 Intucompound is used to stop the spread of fire and smoke around services that pass through compartment walls and floors, whilst providing a load bearing capability in floor seals. The system also provides thermal, acoustic and air sealing performance.

FR230 is suitable for the following service penetrations: single cables, cable bundles, loaded cable trays/ladders/baskets, non-combustible pipes.

FR230 has also been tested in conjunction with other Nullifire closer devices (e.g.FP302 Intustrap, FS709 HP), to seal cable trunking, combustible pipes, insulated non-combustible pipes, fire rated cable enclosures.

FR230 may also be used around dampers & ventilation ducts (consult manufacturer).

Typical areas of use include: health and leisure facilities, schools, universities, modular construction, commercial buildings, hospitals, retail and industrial units, train stations, nuclear power plants, etc...

Packaging

20 kg bag

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Available Colour

Off White

Traceability & Product Identification

Nullifire is bringing unique identification technologies to the market, offering architects, specifiers, main contractors, and applicators guaranteed traceability of product on-site. Our traceability technologies are not visible to the naked eye, and do not affect performance or product aesthetics.

FR230 features Optifire+, a unique pigment technology, visible only with a specific Nullifire detector ; Optifire+ offers lifetime identification, and remains traceable even after a fire.

Storage

Store in secure, dry warehouse conditions between +5°C and +30°C

Certificates & Approvals

ETA 20/1316

CE 2531-CPR-CX010108

UKTA 0843-UKTA-22/0063

UKCA 0843-CPR-1254

UL-EU-01057-CPR

Technical Characteristics

Composition		Gypsum-based mortar compound
Acoustic Rating	EN ISO 10140:2-2010	Up to 50 dB
Compression Strength At 10%	EN 1015-11	>10 N/mm ²
Cure Rate	+23 °C / 50 % RH	Touch dry between 60 to 90 minutes Ready for traffic after 50 hours Full through cure after 35 days
Density		Dry: 580 kg/m ³ Wet mix (ratio 2:1): 1500 kg/m ³ Cured (ratio 2:1): 1200 kg/m ³
Reaction To Fire	EN 13501-1	Euroclass A1
Durability	EN 13162, EN 14303, EN ISO 1519	Type Z2: intended for use at internal conditions with humidity classes other than Z1, excluding temperatures below 0°C, rain and UV
Minimum Water Temperature		+3°C
Mix Ratio		2:1.5 up to 3:1 (trowelling) 2:1 (pouring)
Yield		4 bags/m ² at 100mm depth
Pot Life In +20°C	+23 °C / 50 % RH	~ 30 min

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Technical Characteristics

Touch Dry / Skin Formation Time	+23 °C / 50 % RH	~ 60-90 min
Air Permeability	EN 1046	Air pressure tested up to 2000 Pa
Thermal Conductivity	EN 6946	FR230 : $\lambda = 0,25W/(m.K)$ FB750 used as shutter : $\lambda = 0,038W/(m.K)$
Application Temperature		+3°C to +40°C
Service Temperature		Maximum +70°C
Environmental Performance		EPD (Generic Mortar EPD from FEICA)
Load Bearing Capacity	Tested to a 1000 kg point load	2.5 kN/m ² after 50 hours
Storage		Store in dry shaded conditions between +5°C and +30°C.
Shelf Life		12 months when stored as recommended in original unopened containers.
Cleaning		Immediately remove all excess compound before cure. Clean tools in warm water. Cured compound can only be removed mechanically.

Substrate Preparation

All substrates must be suitable, clean and sound, free from dirt, grease and other contamination.

Necessary Tools

Bucket
Power mixer
Trowel
Water

Protective Equipment

Ensure all recommended protective equipment is worn during handling & use of this product. For full recommendation, refer to safety data sheet.

Mixing

FR230 Intucompound is best mixed using an electric mixer, or by hand if necessary.

Start by filling a clean container with water:

~ 2 : 1.5 ratio for a trowable mortar (2 kg of mortar to 1.5 litres of water) - ratio can be up to 3:1 for a firm mix, used on vertical applications

~ 2 : 1 ratio for a pourable mortar (2 kg of mortar to 1 litre of water).

Gradually add the FR230, stirring continuously to obtain a smooth, homogeneous mixture.

Mix the quantity of mortar required for use, allowing for a mix life of 20 to 30 minutes (depending on temperature and ratio).

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Setting time is normally between 60 and 90 minutes.

Preparation

Ensure all services passing through the compartment penetration are suitable for use with FR230 and have been installed to the satisfaction of all relevant parties (we recommend checking TDS's as supplied by the manufacturer of the service for all other considerations).

Identify all services types and ensure you have the required suitable Nullifire ancillary products available (e.g. FS709 HP or FP302 Intustrap).

If decorative finish is required to surrounding substrates, please use a masking tape.

Application

Floor installation up to 1.21 m² :

Measure opening size and service locations and dimensions.

Transfer measurements onto FI140 Shutter Slab or FB750 Intubatt.

Ensuring suitable compression, locate shutter between service and substrate within floor level, allowing for a minimum 100mm depth of compound.

The shutter may be surface mounted beneath the opening and secured to the floor slab using mechanical fixings.

Ensure all shutter breaches or openings around services are filled prior to FR230 pour.

Mix FR230 to the required ratio (2:1 trowel grade, 3:1 pour grade) ensuring non contaminated water supply and clean tools are used (power mixers are recommended).

Mix sufficient FR230 to achieve 40 to 50% fill ratio (40 to 50mm). Wait for 60 minutes and then top up to required level (100mm). This is recommended to put minimum load on shutter.

Float with a flat trowel and light water spray.

If waterproofing agent is to be applied, full cure (35 days) must be achieved before application.

Additional requirements for larger floor openings, above 1.21 m² or a maximum span of 2000 mm x infinite length:

An angle framework system will be required, using a minimum 50 x 50 x 2 mm galvanised steel slotted angle.

Measure around perimeter and cut angles to suit.

Secure to surrounding substrate using suitable non-combustible, hammer-in fixings, with a minimum embedment of 50mm at 300mm centres or 2 fixings minimum per cut piece.

Across the span, lay back to back 50 x 50 x 2 mm angles at 400 mm centres (back to back angles should be secured to each other, however not to the perimeter angle). In the event of an obstacle, the angle should be taken to each side of the service, and an additional piece placed parallel to the span within 50mm of the service.

As per smaller openings, measure all service locations within the framework and transfer dimensions onto FI140 Shutter Slab or FB750 Intubatt (shutter will sit 2 mm above vertical angle flange).

Wall Installation up to 1.21 m²:

Ensure any ceiling or soffit deflection is considered at this point, as a movement joint may be required.

Measure opening size and service locations and dimensions.

Transfer measurements onto FI140 Shutter Slab or FB750 Intubatt.

Ensuring suitable compression, locate shutter between service and substrate either within the opening or to one side of the wall. Repeat on opposing side in 100mm to 200mm increments (ensure there is minimum 100mm between internal faces of

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shuttering).

Ensure all shutter breaches or opening around services are filled prior to FR230 pour.

Mix FR230 to the required ratio ensuring non contaminated water supply and clean tools are used (power mixers are recommended).

Mix sufficient FR230 and pour to achieve the required height of fill behind the low shutter.

Additional shutters will be required as you progress. The last area to complete may require a trowel grade mix-ratio.

Skim with a flat trowel and a fresh mix if appearance requires.

Wait for 120 minutes prior to removing any shuttering.

If waterproofing agent is to be applied, full cure (35 days) must be achieved before application.

Tool Cleaning

Immediately remove all excess compound before cure. Clean tools in warm water. Cured compound can only be removed mechanically.

Please Note

Rigid floors must have a minimum thickness of 150mm (walls 100mm) and comprise aerated concrete or concrete with a minimum density of 650 kg/m³.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance and be suitable for the imposed load of the FR230.

Re-bar may not be used within a FR230 fire seal as a load benefit.

If the floor slab is less than 150mm thick, FI140 Shutter Slab or FB750 Intubatt should be face fixed to the underside using suitable anchors (alternative products may be used for shuttering, however if your chosen shutter is combustible, it must be removed after 50 hours).

FR230 should never be cast across a movement joint nor supported by a non-load bearing element.

Do not try to extend the working time by adding additional water.

Always mix in clean buckets. Using dirty buckets with mortar residue from previous mixes can reduce working time or prevent the product from achieving a correct chemical cure and bond.

Do not use directly around CPVC pipes; for this specific application, please use FS719 HP Blue for CPVC.

If used around Pegler X-Press Carbon Steel pipes, the pipe manufacturer should be consulted, and their recommendations followed.

Maintenance

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

Guarantee / Warranty

Tremco CPG UK Limited products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with Tremco CPG UK Limited written instructions and (b) in any application recommended by Tremco CPG UK Limited, but which is proved to be defective, will be replaced free of charge.

No liability can be accepted for the information provided in this leaflet although it is published in good faith and believed to be correct.

Tremco CPG UK Limited reserves the right to alter product specifications without prior notice, in line with Company policy of

Technical Data Sheet

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continuous development and improvement.

It is a requirement of the installer to ensure suitability and compatibility of all elements before installation commences and that compliance can be achieved as required.

Health And Safety Precautions

Safety data sheet must be read and understood before use.

Technical Service

Tremco CPG UK Limited 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 01942 251400

Technical Data Sheet

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Certification

