**GENERAL PRODUCT DESCRIPTION**

AIS FR Mortar- FP 305 is a dry white powder consisting of inorganic compounds and perlite.

When mixed with water, the compounds form a highly thermally insulating fire sealing compound to prevent the spread of fire and smoke through openings in fire rated walls and floors, including openings formed around building service penetrations.

It will also maintain the acoustic design performance in walls and floors.

FP 305 expands approx. 1% by hydraulic action during curing ensuring a very tight seal around the service penetrations and the surrounding opening apertures. It is easy to sand or drill. The compound dries to an off-white color which may be painted.

**PROPERTIES**

* Classified in walls and floors of concrete, brick, gypsum etc.
* Suitable for cables, bundled cables, cable racks, cable trays, steel, copper, plastic pipes and air ventilation ducts
* Simple to apply leaving a very smooth finish
* High degree of mechanical resistance; the seal is load bearing without reinforcement
* No priming necessary prior to application in most building material substrates however metal services in contact with the seal must be corrosion protected
* Suitable for most surfaces, included concrete, bricks, steel, plastic etc., but not suitable to fitting of doors or in service openings that involve movement
* The product is certified for use in walls but it is recommended to use AIS FR Board- FP 409 for these applications
* Fully set within 1 hour
* The fire performance specification of the compound has been derived when the seal has been left to cure for 1 month and Nearly unlimited Storage time

**SOUND INSULATION**

|  |  |
| --- | --- |
| Description | Sound Reduction |
| Single sided cast ≥ 50 mm thick as linear seal | Rw 64 dB |
| Double sided cast ≥ 25 mm thick as linear seal | Rw 64 dB |
| Single sided cast ≥ 50 mm thick as large seal | Rw 48 dB |
| Double sided cast ≥ 25 mm thick as large seal | Rw 48 dB |

**EMISSION DATE (INDOOR AIR QUALITY)**

|  |  |  |
| --- | --- | --- |
| COMPOUND | EMISSION RATE AFTER 2 DAYS | EMISSION RATE AFTER 4 WEEKS |
| TVOC | TVOC 12 μg/m3 | < 5 μg/m3 |
| TSVOC | TSVOC n.d. | < 5 μg/m3 |
| VOC w/o NIK | n.d. | < 5 μg/m3 |
| R Value | n.d. | < 1 |
| Formaldehyde | 7.1 μg/m3 | n.d. |
| Acetaldehyde | < 3 μg/m3 n.d. | n.d. |
| Sum for+ace | < 0.006 ppm n.d. | n.d. |
| Carcinogenic | < 1 μg/m3 | < 1 μg/m3 |

FP 305 has been subject to concentrated load and impact tests in floors according to ETAG 026-2 and EOTA TR001

Clause 2. The tests were conducted on the minimum allowed cast depth of 100mm.

According to the loading limits in the table below, reinforcement is not necessary, however it is highly recommended that the edges of the aperture are brushed free of any dust or loose particles and that any contamination is washed away using clean water.

Moistening the edges well before casting will improve adhesion. FP 305 should not be cast in surface treated concrete. The mortar must be mixed to a thick but fluid mass at a rate of approx. 2 parts of powder to 1 part water. Maximum loadbearing performance will be achieved 28 days after casting. Test results:

|  |  |
| --- | --- |
| TEST IN 1500X1000MM FRAME | RESULTS |
| Soft body impact, serviceability | 500Nm |
| Soft body impact, safety in use | 700Nm |
| Hard body impact, serviceability | 6Nm |
| Hard body impact, safety in use | 10Nm |
| Concentrated load to ETAG 26-2 | 15kN |

**TECHNICAL SPECIFICATION**

|  |  |
| --- | --- |
| **Condition** | Powder ready for mixing with water |
| **Production consumption at 2:1 mix** | Approx. 3.42 bags per m2 @ 50mm depth |
| Approx. 6.83 bags per m2 @ 100mm depth |
| **Dry density** | About 900 kg/m3 after full cure |
| **Flash point** | None |
| **Reaction to fire** | Class A1 according to EN 13501-1 |
| **Hardened** | Less than 1 hour depending on the local climate |
| **Totally hardened** | Up to 30 days depending on thickness and temp |
| **Flexibility** | None |
| **Durability / Service** | Class Z2 |
| **Thermal Conduct** | 0.051 W/mK |
| **Working life** | 30 years |
| **Storage** | No particular limit for unopened bags in dry places with storage temperatures between 5˚C and 30˚C |
| **Compatibility** | Suitable for use with most materials, but should not be used in direct contact with metals that may corrode |
| **Limitations** | Should not be used in permanently damp areas or in moving joints |
| **Classification** | Fire seal for fire rated openings and penetrations class EI 240 |
| **Color** | Off white |
| **Packaging** | Bags of 20 liters |