

Chelfix R4500

Special Cement Based, Fire Resistant Mortar

Product Description

It is a special mixture containing hydraulic binders, low weighted aggregates and special additives, which can be used on inner and outer walls due to its fire resistant and thermo-acoustic insulation properties

Areas of Application

- Draft, smoke, fire block sealant for applications in wood-frame construction where an ASTM E136 non-combustible sealant is required.
- In sections where fire resistance is required.
- To prevent the fire on the shafts of dwellings, shopping malls, hospitals, security buildings and.
- In sections of the cable ducts.
- Use to fill interior openings around vents, pipes, ducts, chimneys and fireplaces at ceiling and/or floor level in non-rated wood frame, one and two family dwellings where non-combustible filler compound is specified.

Advantages

- Adheres well to masonry.
- It has fire protection properties. it has been verified that it protects any surface (brick, concrete, iron, wood, etc.) from fire.
- Paintable once heat cured.
- If a thick plaster is required, it can be applied with a layered plaster process.
- When applied in the appropriate thickness; while allowing wall transparency on the inner and outer surfaces, increases thermal and acoustic isolation.
- It prevents mold formation on inner surfaces.
- After applying and drying, it is easily discharges moisture from within the body.
- Easy water clean-up, low odor, VOC compliant.
- Suitable for internal and external applications.

Applications

Instructions

Surface Quality: The surfaces must be clean, smooth, solid, and free from any anti-adhesive substance such as dust, oil, dirt, rust, mold oil, detergent and waste. Weak parts on the surface should be removed.

Surface Preparation: Cement slurry and weakened parts should be removed, and there should be no materials such as oil dirt and rust on the surface. Absorbent surfaces must be pre-wetted, but there should be no water accumulations.

Chelfix R4500

Special Cement Based, Fire Resistant Mortar

Mixing: Clean, clear water received from normal ambient temperature into a clean container which is free from all kinds of materials which prevent adhesion. Chelfix R4500 in powder is poured into a container filled with water. The product is mixed with a low speed mixer until a homogeneous mixture without lumps is obtained. Mixing time should be at least 5 minutes, the mortar obtained at the end of the process should be rested for 3 minutes and mixed again until it becomes homogenous for 2 minutes. After the material has entered the reaction, it should not be mixed again with water.

Application Notes/ Restrictions

- For outdoor applications, the first 3 hours of sunshine should be protected from rain and frost.
- In cement based products, reaction times are affected by ambient and ground temperatures. Reaction times are shortened in a hot environment, and extend in a cold environment.
- Hot water should be used in cold conditions.
- The prepared mixture should be placed in 5 min. depending on the air temperature and the amount of water.
- In hot environments, cold mixing water should be used.
- During the application of the product, work clothes suitable for occupational health and safety rules should be worn and appropriate glasses and masks should be used.
- Prepared mortar is applied by trowel, if desired, feather application is made to make the application smoother.
- it must be protected after application against adverse weather conditions such as direct sunlight, high air temperature (above +40°C), rain and frost. The product should be cleaned thoroughly with water and detergent before it is fully cured and hardened.
- Immediately after application, before hardened, the equipment should be cleaned with water. After the product is hardened, it should be cleaned by mechanical methods.

Chelfix R4500

Special Cement Based, Fire Resistant Mortar

Technical Data

Properties	
General Informations	
Appearance	Light grey powder
Package	10 kg kraft bag
Application Informations	
Application Temperature	(+5°C) - (+40°C)
Mixture Ratio	6.0 - 5.5 lit water / 10 Kg powder
Pot Life	Min. 30 min.
Time to Put into Service	1 day
Performance Information	
Flexural Strength (EN 12808-3)	$\geq 1.5 \text{ N/mm}^2$
Compressive Strength (EN 12808-3)	$\geq 9.0 \text{ N/mm}^2$
Temperature Resistance	+900°C
Hazardous Substances (EN 12004)	See the safety data sheet
Fire Response	A1

Consumption Table

Chelfix R4500	Mixture Density (kg / lit)	1 mm/ 1m2 Powder Consumption (kg)	Mixture Water Amount (lit)
10 kg kraft bag	~1.325	0.83	4.5 – 5.5

Technical data are approximate values obtained from the laboratory study of Chelfix Construction Chemicals for finished products obtained at +20°C air temperature and 50% relative air humidity and valid for its performance after 28 days

Chelfix R4500 Experiment results

Plates formed with Chelfix R4500 product in 30x30 cm dimensions and different thicknesses were exposed to 550°C temperature, and the temperatures formed on their back surfaces were examined;

Thickness (cm)	Time (min)	Temperature °C
4 cm	30 min	85°C
2 cm	30 min	91°C
1.2 cm	15 min	90°C
1.2 cm	20 min	98°C
1.2 cm	21 min	100°C

Storage

Chelfix R4500 has a shelf life of 12 months from date of manufacture if stored at temperature between 2 °C and 50 °C.



Chelfix R4500

Special Cement Based, Fire Resistant Mortar

Fire

Chelfix R4500 is nonflammable.