



The Chemical Company

CONGRESIVE® 1420

Epoxy Based, Flowable Adhesive

Description of Product

CONGRESIVE® 1420 is epoxy based, solvent free, moisture tolerant, flowable adhesive with two components for bonding freshly mixed and hardened concrete.

Ministry of Public Works Pos. No: 04.613/8-a

Fields of Application

- Bonding freshly mixed concrete and hardened concrete,
- Corrosion protection of reinforcement in structural repairs,
- Priming the concrete substrates under repair mortars,
- Bonding various building materials to each other, concrete, stone, metals etc.,
- Chemical anchoring.

Technical Data

Product Chemistry CONGRESIVE® 1420 Compt. A CONGRESIVE® 1420 Compt. B	Epoxy Resin Epoxy Hardener	
Colour	Grey - Fume	
Solid Content	100 %	
Mixed Density	1.55 ± 0.05 kg/liter	
Viscosity	8500 N/mm ² .s	
Compressive Strength (20°C) TS EN 196 (1days) (7days)	>50 N/mm ² >80 N/mm ²	
Flexural Strength (20°C) TS EN 196 (1days) (7days)	>20 N/mm ² >30 N/mm ²	LX
Bonding Strength (7 days) to concrete to steel	>3.0 N/mm ² >3.5 N/mm ²	
Application Thickness	Min. 0.5 mm Max. 30 mm	
Application Temperature	+10°C - +30°C	
Service Temperature	-30°C - +80°C	
Pot Life	60 minutes (20°C)	
Covering with Freshly Mixed Concrete	Min. 5 minutes Max. 40 minutes	
Fully Cured at 20°C	7 days (20°C)	

Typical values are obtained from the test results of 4x4x16 mortar prism in 23°C and 50% relative humidity conditions. High temperatures shortens the curing and working time, lower temperatures extends the durations.



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Features and Benefits

- Easy to apply with brush, roller or directly pouring.
- Perfect adhesion between the freshly mixed and hardened concrete.
- Provides a corrosion protection barrier on the reinforcement.
- Provides perfect adhesion even on damp surfaces.

Application Procedure

Preparation of Substrate

The concrete surfaces must be sound, clean and dry. It shouldn't be weakened by over - trowelling and lack of curing. The concrete should be free of frost, curing membranes, waterproofing treatments, oil stains, laitance, friable material and dust. If there is a water leakage it must be drained or properly plugged.

Steel surfaces should be cleaned from rust by sand blasting and if needed new reinforcement should be installed. The edges of the broken surfaces should be saw cut.

Mixing

CONGRESIVE® 1420 has two components in pails, produced according to right mixing ratio. Material temperature should be between 15 - 25 °C before mixing. Component B should be added into the Component A without any remaining material in the pail. It should be mixed with using a proper mixer (~300rpm) for polymer mixing. Mix the components at least 3 minutes to have a homogenous mixture.

Mixing Ratios

CONGRESIVE® 1420	Compt. A	Compt. B
Quantity	5,0 kg	2,5 kg
Mixed Density	1,55 kg / liters	

Application Method

CONGRESIVE® 1420 should be applied to the prepared surface by using a paint brush, roller or can be sprayed with proper equipment. Freshly mixed concrete should be cast when the epoxy is still wet. Time interval for concrete casting can be changed depending on the weather conditions. The concrete should be cast in 40 minutes after priming the hardened concrete.

For anchoring the anchor holes should be drilled 6 mm wide than anchor bar's diameter and in designed depth. The holes should be cleaned by using steel brush and air guns. Mixed material should be put in a mortar gun with a proper nozzle and start to fill the holes into half depth. Install the anchor bar into the hole slowly by screwing and do not drive the bars.

Coverage

1.6 kg/m² for obtaining 1mm thick layer.

Watchpoints

- During the application the substrate and environment temperature should be between 5 - 30 °C.
- Resinous materials' pot life and curing times vary depending on the relative humidity, substrate and environment temperature. Reaction gets slow in low temperatures and it causes to extension on pot life and working time. On the other hand high temperatures speed up the reaction, which results to short pot life and working time. For full curing of material, both the substrate and environment temperature shouldn't be under allowed application temperature.
- **CONGRESIVE® 1420** is provided in ready to mix pails. Do not add any solvent etc. into the mixture during the application.
- Mixing should be made with proper mixers and do not allow mixing by hand.

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Cleaning of Tools

After the application all tools should be cleaned with a proper detergent or solvent such as thinner. **CONGRESIVE® 1420** can be cleaned with only mechanical abrasion after hardening.

Packaging

7.5 kg set
Component A : 5 kg pail
Component B : 2.5 kg pail

Storage

Store in original container in cool (+5°C - +25°C) and dry indoor conditions.

Shelf Life

18 months under proper storage conditions after production date.

Health and Safety Precautions

It is dangerous to get close to the store areas with fire. The store must be well ventilated. Work clothes, protective gloves, glasses and mask defined in Labour Laws must be used during the application. Avoid from material to contact with skin and eyes. In case of contacting wash your skin with water and go to doctor immediately

Don't bring any food and drink to the application area. Store the material away from the children. For further information Material Safety Data Sheets should be read.

Disclaimer

This information and all further technical advice are based on our present knowledge and experience. BASF Yapı Kimyasalları San. A.S. is

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