

GIRtech FIRECAST Instruction to use



Concrete mix GIRtech FIRECAST is a multifunctional refractory product.

It is designed for molding refractory products by vibrocasting, pouring the brickwork lining layer into the forms, and repairing masonry/joints of heating units.

To get high quality refractory concrete, repairing mass or items, it is important preparation, drying and heating processes undergo in accordance with the prescribed procedure.

Solution preparation:

Casting. Add 3.4 – 3.8 fl. oz of water to 2.2 lb of dry concrete mix. Mix the molding material in a concrete mixer until homogeneous. Lubricate molds to prevent adhesion of the formed product to the walls of the mold before pouring samples. Mount the lubricated forms on a vibrating table and fix them. Turn on the vibrating table and fill in the mold with equal portions of a concrete mass. Vibrate the mold for 3-10 min depending on the product size until a flat surface appears. The form can be disassembled in 3-5h, after the concrete product acquired its original strength. After that dry and fire the product.

Pouring the brickwork lining layer into forms. Add 4.0 – 4.2 fl. oz of water to 2.2 lb of dry concrete mix. Mix the molding material in a concrete mixer until homogeneous. It is necessary to set the form before pouring the mass, then fill it in with a concrete mass, level the surface. Disassemble the form in 3-5h, after the concrete product acquired its original strength. After that, treat the concrete thermally to obtain the stated properties and strength.

Repairing masonry or joints. Add 4.0 – 4.2 fl. oz of water to 2.2 lb of dry concrete mix. Mix the mass in a concrete mixer or manually until homogeneous. Before repairing, moisten the surface to improve adhesion. After repairing, allow the concrete to set and dry. Then the repaired heating unit can be fired.



Thermal treatment:

Drying. Dry the products under normal conditions at the ambient temperature of 64 - 72 °F for 48h. Under conditions of high humidity, drying can take longer.

Firing. Fire the products in several stages: drying, smooth rising a temperature to a maximum, holding at a maximum temperature. Dry the product at a temperature of 230°F for 2-6h, depending on the product dimensions. The temperature should rise to a maximum of 390 °F per hour. Maintain the product at a maximum temperature for at least 2h.

Recommended Firing Modes

Firing temperature, °F	Firing mode
230	0-230 – 1h 230-230 – 2 (6)h
1110	0-230 – 1h 230-230 – 2 (6)h 230-1110 – 3h 1110-1110 – 2h
1830	0-230 – 1h 230-230 – 2 (6)h 230-1830 – 5h 1830-1830 – 2h
2370	0-230 – 1h 230-230 – 2 (6)h 230-2370 – 6h 2370-2370 – 2h

Attention!

- Refractory concrete GIRtech FIRECAST does not develop strength in the drying process unlike Portland-cement concrete does;
- Do not fire finished products, brickwork lining, and the repaired part of the masonry until complete drying;
- Keep the concrete mixture from moisture during drying;
- Do not paint concrete finished products and concrete surfaces until complete drying and firing;
- Do not plaster nor tile concrete surfaces until complete drying and firing.

Safety. Concrete GIRtech FIRECAST is a non-toxic and safe product, containing natural components, therefore the mixture and products thereof can be used outside and inside the premises.

Do not inhale. The powder may irritate the respiratory tract.
In case of contact with eyes, flush them with some clean water.

