

Congrout® RES

RAPID STRENGTH CEMENTITIOUS PRECISION GROUT / MORTAR

DESCRIPTION

Congrout RES is a rapid early strength non shrink cementitious grout/mortar. **Congrout RES** provides a flowing grout/mortar with controlled expansion in both wet and hardened states. It should be specified where rapid early strength gain is required. **Congrout RES** complies to ASTM C928.

USES & ADVANTAGES

Congrout RES is used for precision grouting or for repairs of highways, runways & bridge decks where operation is required with a few hours of placing the material.

Advantages include:-

- Hydrogen free gaseous expansion.
- Rapid strength gain.
- Chloride free.
- Excellent durability.
- Excellent flow.
- High strength gain even at low temperatures.
- High ultimate strength.
- Shrinkage compensation in both plastic & hardened state.
- Useable for a wide range of applications and temperatures.
- Flowing grout for gaps 10 mm. to 150 mm.
- No bleeding.
- Non shrink, non toxic and non corrosive.

PROPERTIES

| | |
|--|--|
| Appearance: | Grey powder |
| Fresh wet density: | Approx. 2,100 kg./m ³ Depends on consistency |
| Bond Strength to Concrete: ASTM D4541 | > 2.5 N/mm ² at 28 days (Concrete failure) |
| Drying Shrinkage: 23°C C/RH 50% ASTM C490 | < 500 micro strain at 28 days |
| Resistivity: | < 12,000 ohm cm at 28 days |

PERFORMANCE PROPERTIES

Water content 11.6% by weight of **Congrout RES**.

Approx. Compressive Strengths at 30°C
ASTM C109

| Compressive Strength | Typical Results |
|---|-------------------------|
| 2 hrs | 25-30 N/mm ² |
| 4 hrs | 35 N/mm ² |
| 8 hrs | 40 N/mm ² |
| 24 hrs | 51 N/mm ² |
| 28 days | 70 N/mm ² |
| Expansion : | 1.0-2.0% |
| Working Time : | Approx. 10-12 mins. |
| Consistency : | Flowable |
| Setting time@25°C ASTM C191-01a / ASTM C807 | |
| Initial | 20 minutes |
| Final | 35 minutes |

Note: These are typical figures results may vary depending on water content used, mixing time, and ambient temperatures.

SURFACE PREPARATION

Surface should be clean, sound and free from oil, grease, laitance and loose particles. Metal surfaces should also be clean & free from rust, oil & grease. Bolt holes or fixing pockets must be cleaned out with blown clean air.

MIXING

Congrout RES should be mixed using a suitable mixer. For flowable consistency use a slow speed < 400 rpm hand drill and paddle. For large works use a high shear vane grout mixer. Drum mixers may not mix sufficiently. For **Congrout RES** use 2.9-3.1 litres of clean water for pourable consistency and 3.3 to 3.5 ltr for fluid consistency. Add grout slowly to the water (add the total bag). Mix continuously for 3 minutes ensuring a smooth even consistency is obtained.

APPLICATION

Ensure the substrate is correctly prepared, no contamination and saturated with water at least 3 - 4 hours prior to pouring the grout. No free water should be left. Ensure air entrained into the grout is able to escape. Maintain continuous head when base plate grouting. Mortar flow should not be interrupted. Formwork should not allow grout loss. Base plates should be clean and free from oil, grease or scale. Air venting holes should be provided to allow venting in isolated spots. Place the grout within 10 minutes of mixing.

CURING

To prevent rapid surface drying and crazing, use a suitable curing compound from Cormix's Corcure range. e.g. **Corcure 90**. At temperatures below 20°C early strength gain may be affected.

IMPORTANT NOTES

- Minimum applied thickness of **Congrout RES** is 10 mm. maximum 150 mm.
- Bolt holes should be grouted prior to grouting between substrate and base plate.
- Continuous flow should be maintained with a continuous head of grout.
- At temperatures above 35°C - 40°C cooling of water with ice will make handling & placement easier. Mixers & tools should be kept shaded.

CONSUMPTION

For fluid consistency : approx 72-74 bags of 25 kg/m³ by using 294 litres of water.

For pourable consistency : approx 74-77 bags of 25 kg/m³ by using 243.6 litres of water.

CLEANING

Clean all tools with water immediately after use

PACKAGING

25 kg. 4 Ply. plastic lined bags.

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STORAGE CONDITIONS & SHELF LIFE

Store in dry shaded conditions. The shelf life is 6 months if kept dry in original packaging. High temperatures and humidity may reduce shelf life.

HEALTH & SAFETY

During use avoid inhalation of dust & contact with skin & eyes. Wear protective clothing. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately - **do NOT** induce vomiting.

TECHNICAL SERVICE

The Cormix International Technical Service Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

QUALITY ASSURANCE

ISO 9001 : 2015 verified by TUV Nord

CONTACT DETAILS**Cormix International Limited**

89 Romklao Rd., Sansab, Minburi, Bangkok 10510

Tel. (66 2) 917 3955-8, 543 8890

Fax. (66 2) 917 3959, 543 8891

<http://www.cormix.com>