



# GROUT ZE Series Combex Grout ZE Series – G2

**Non-Shrink Ready to Use Highly, Strength, Highly Flowable Precision Non Shrink Grout**

## Product Description

- Z100 E (0-2mm)
- Z104 E (0-5mm)
- Z108 E (0-14mm)

FARCO GROUT Non-shrink, Non-Metallic Grout is a blend of portland cement, especially blended aggregates and cementitious admixtures.

## Application

- Column base plates
- Under heavy machinery which transmit high stress to the grout such as turbines, generators, compressors, diesel engines and equipment operating under heavy vibration.
- Bridge bearing plates
- Grouting gaps between prefabricated elements
- Grouting of anchors and dowels
- Crane rails
- General Machine base grouting

## Technical Specification

Type		Z100E	Z104E	Z108E	
Size	mm	0-2	0-5	0-14	
Grouting Height	mm	6-80	40-120	>100	
Amount of water	%	10.5-11.5	9-10	9-10	
Consumption (dry grout)	Kg/m <sup>2</sup>	2180	2170	2160	
Density (mixed grout)	Kg/m <sup>3</sup>	2450	2400	2390	
Flowability (ASTM C827)	mm (%)	≥240 (140)	≥240 (140)	-	
Slump flow	mm	-	-	>550	
Expansion (ASTM C827)	%	≥2.5, ≤4	≥2.5, ≤4	≥2.5, ≤4	
Bleeding (ASTM C920)	% volume	None	None	None	
Type		Z100E	Z104E	Z108E	
Compressive Strength ASTM C1107,C109 Z100 5×5×5 Z104 10×10×10 Z108 15×15×15	Kg/cm <sup>2</sup>	24h	≥430	≥420	≥390
		7d	≥700	≥670	≥660
		28d	≥880	≥840	≥820
		Flexural Strength (ASTM C348)	Kg/cm <sup>2</sup>	28d	≥110

## Advantages

- Low water permeability
- Ultra high 1,7 and 28 day compressive strengths
- Highly fluid, non-shrink, expanding cementitious grout.
- High early and final mechanical strength
- No chlorides and non Metallic

## Standard Compliance

FARCO GROUT ZE is according to ASTM C 1107

## Application

### Surface Preparation

- Concrete Surface must be structurally sound, free of grease, oils, coatings, dust, curing compounds and other contaminants.
- smooth substrates must be abraded by mechanical devices or water jet to ensure proper bonding
- Saturate the prepared area with potable water for 6 to 24 hours before application and remove excess water prior to grouting.

### Forms

- The forms for all types of grout should be rigid, sufficiently tight-fitting, and sealed to prevent leakage. They should also extend at least 25 mm above the highest grout elevation.
- The forms on the placement side should extend above the bottom of the plate to from a head box The head box should begin 50 to 100 mm from the plate at about 45 degrees. The slope on the form permits the grout to be pound under the plate with minimum of turbulence and air entrapment. A portable head box with the same configuration may be used.
- The form on the opposite side should be (50 to 100 mm) from the plate and should extend at least (25 mm) above bottom of the plate. On the side of a plate parallel to



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the direction of grout flow, the forms should generally be less than 25 mm from the plate.

## **Mixing and Placing**

- Pour the recommended quantity of clean water into a mixer and start to add dry grout gradually while it is mixing .
- The mixing time should be all the time necessary to provide uniform consistency and breakup all the lumps without bleeding.
- The recommended internal grout temperature is between 15 to 25°C.
- For temperature higher than 35°C it is recommended to store grout packages in a cool shaded environment, avoiding exposure to direct sunlight and water with less than 20°C temperature should be used for mixing.
- In winter, warm water should be used for mixing and grout surface must be protected after placement.
- The mixed grout must be placed max 20 minutes after mixing.
- Extra mixing water leads to lower early and final strength.
- The placement must be done continuously from one side to eliminate any air or

pre-soaking water becoming trapped under the base plate.

- After placement and initial setting, cover it with wet burlap and then cover it with plastic to avoid evaporation.
- Wet cure the grout for at least 7 days.

## ● **Packaging**

FARCO GROUT ZE Series are supplied in 30kg plastic bags.

## ● **Storage**

FARCO GROUT ZE Series have a shelf life of 12 month if kept in a dry store in sealed bags.

## ● **Safety and Precautions**

FARCO GROUT ZE contains portland cement and sand. Cement will cause irritation . Avoid contact. Use of a dust respirator, safety goggles and rubber gloves are recommended.

## ● **Technical Service**

The SHIMISAKHTEMAN technical service Department is available to assist you in the field and correct use of our products.



242 Bldg., Mirdamad Blvd., After Naft St., Tehran. Iran

Tel: +98 21 (22263100 , 22263099 , 22259736) Fax: +98 21 22260586

Shimi Sakhteman



+98 21 27427