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# ARDEX BG 90 GP

**General Purpose, High-Strength, Shrinkage-Compensated, Class-A-Type Construction Grout**

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High strength

Versatile - Dry pack, pourable and pumpable

Positive expansion when the grout is in its plastic state

Shrinkage compensated when the grout is in the hardened state

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# ARDEX BG 90 GP

## General Purpose, High-Strength, Shrinkage-Compensated, Class-A-Type Construction Grout

### DESCRIPTION

ARDEX BG 90 GP is a general purpose, high-strength, Class-A-Type construction grout that can be mixed to a non-slump or pourable mix and is suitable for a wide range of projects and applications. The cement-based formulation contains additives that provide positive expansion when the grout is in its plastic state and is also shrinkage compensated when in the hardened state. It is suitable for applications requiring a grout thickness between 12mm and 100mm. ARDEX BG 90 GP is ideal for applications where high compressive and flexural strength is required. Depending on the water ratio, a compressive strength of up to 70MPa is achieved after 7 days and 90MPa after 28 days.

### Typical Applications

ARDEX BG 90 GP may be used for:

- General purpose grouting applications
- Base plates, machine bases, equipment support
- Column bases (steel and precast concrete)
- Precast panel connections and between precast panels
- Underpinning
- Void filling and dry packing
- Conveyor supports; and other similar grouting applications.

### PREPARATION

The surface to be grouted must be clean, sound and free of dust, dirt, oil, grease, curing compounds, release agents and other barrier materials. Damaged or contaminated concrete must be removed to obtain a good bond to the substrate.

### Pre-soaking

The surface must be pre-soaked for several hours prior to grouting to reduce the porosity of the substrate. Remove excess freestanding water on the surface prior to grouting.

### Formwork Preparation

The area to be grouted must be enclosed with good quality rigid watertight formwork. The formwork should be constructed with enough room to use a grout header box system. The formwork must be able to rigidly confine the ARDEX BG 90 GP until it has enough strength to be removed depending on the application. It is recommended to use an appropriate form release agent. Formwork should be flushed out just prior to application.

### MIXING

|          |                              |
|----------|------------------------------|
| Stiff    | 11% - 13% water (2.2 - 2.6L) |
| Plastic  | 13% - 15% water (2.6 - 3.0L) |
| Flowable | 15% - 18% water (3.0 - 3.6L) |

The mixing ratio can be varied to achieve the right consistency for the job which can vary from a stiff hand packable consistency to a flowable consistency. Always ensure that the BG 90 GP powder is added to the water during mixing. Use an electric type mixer as hand mixing is not suitable. Allow for approximately 3 minutes of mixing to achieve optimum mix results. The mix should be used immediately after mixing. After this time, discard any mix that shows signs of stiffening. Do not remix. It is strongly recommended that a small trial batch is tested to determine the best mix consistency for the project at hand.

### CURING

#### Stiff and Plastic

For stiff and plastic consistencies, cure the product thoroughly after it has set by keeping it wet and covered with plastic sheets for at least 7 days. Upon removing the plastic sheets, it is recommended to apply an approved ARDEX curing compound such as ARDEX BA 70 CC.

#### Flowable

For flowable mixes, it is very important to prevent moisture loss during the early plastic state prior to setting. This can be achieved by keeping the unrestrained areas to a minimum. Apply an approved ARDEX curing compound such as ARDEX BA 70 CC after final set on all exposed areas. If formwork is used, also apply ARDEX BA 70 CC immediately after striking the form. Curing compounds should be applied onto the surface according to their respective Technical Datasheet. Improperly cured material may result in surface shrinkage cracks.

### PRECAUTIONS

ARDEX BG 90 GP is not to be used as a tile grout. Do not add additional water to the specified amount. Apply grout in a continuous operation, even in large areas. ARDEX BG 90 GP is suitable for applications between 12mm and 100mm. Keep unrestrained areas to a minimum as this will reduce the final compressive strength of the mix and may result in cracking. Cure time and set will be extended when applied at lower temperatures and accelerated at higher temperatures. Substrate and ambient

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temperature must be a minimum of 10°C and should not exceed 35°C. Large and/or deep volumes of grout can generate excessive heat whilst hardening. This may lead to thermal cracking. More mixing water will increase flow but reduce strength. Entrapping air must be avoided during application. This product is not meant for structural repair and applications where vibration is anticipated.

#### **SHELF LIFE**

ARDEX BG 90 GP has a shelf life of 12 months when stored in the original unopened packaging, in a dry place at 23°C and 50% relative humidity.

#### **CLEAN UP**

Clean all tools in water immediately after use.

#### **SAFETY DATA**

This product may cause irritation and an allergic reaction to the skin. It may cause serious eye injury and irritation to the respiratory system. In case of contact with the eyes rinse with running water (15mins) including removal of contaminated clothing. Wear protective gloves, clothing, eye and face protection. Avoid inhaling dust/ fume/ gas/ mist/ vapours/ spray. Ensure adequate ventilation during mixing and application. Store locked up. Check with your local Council regarding the disposal of contents. Keep out of the reach of children. Call the Poisons Information Centre on 131 126 (AUS) and 0800 764 766 (NZ) or call a doctor if you feel unwell. Additional information is in the Safety Data Sheet (SDS) at [www.ardexaustralia.com](http://www.ardexaustralia.com)

## TECHNICAL DATA

|                                   | <b>Stiff</b> | <b>Plastic</b> | <b>Flowable</b> |
|-----------------------------------|--------------|----------------|-----------------|
| <b>Mix ratio</b>                  | 2.2 - 2.6L   | 2.6 - 3.0L     | 3.0 - 3.6L      |
| <b>Water</b>                      | 13%          | 15%            | 18%             |
| <b>Mixed mortar density</b>       | 2.31kg/L     | 2.27kg/L       | 2.24kg/L        |
| <b>Kg</b>                         | 22.6         | 23             | 23.6            |
| <b>Litres</b>                     | 9.8          | 10.1           | 10.5            |
| <b>Pot life</b>                   | 20 min       | 20 min         | 20 min          |
| <b>Initial set</b>                | 30 min       | 2h 30m         | 6h 30m          |
| <b>Final set</b>                  | 45 min       | 3h 45m         | 7h              |
| <b>Compressive Strength [MPa]</b> |              |                |                 |
| <b>(1day)</b>                     | ≥35          | ≥25            | ≥15             |
| <b>(7days)</b>                    | ≥60          | ≥50            | ≥40             |
| <b>(28 days)</b>                  | ≥70          | ≥60            | ≥50             |

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