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# ARDEX BG 140 HP

**High Performance, High-Strength, Shrinkage-Compensated, Class-C-Type Construction Grout**

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Superior strength with excellent flow

Versatile - Flowable, trowelable and pumpable

Positive expansion when the grout is in its plastic and hardened state

Ideal for precision grouting applications

Non-hydrogen gas forming

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**ARDEX Australia Pty Ltd**

20 Powers Road  
Seven Hills NSW 2147  
1300 788 780  
technicalservices@ardexaustralia.com  
www.ardexaustralia.com

**ARDEX New Zealand Ltd**

15 Alfred Street, Onehunga  
Auckland, New Zealand  
Tel: 0800 227 339  
Email: info@ardexnz.com  
**www.ardex.co.nz**

# ARDEX BG 140 HP

## High Performance, High-Strength, Shrinkage-Compensated, Class-C-Type Construction Grout

### DESCRIPTION

ARDEX BG 140 HP is a high-performance, high-strength, Class-C-Type construction grout that can be mixed to a fluid, flowable or plastic 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 as well as in its hardened state. It is suitable for applications requiring a grout thickness between 12mm and 100mm. ARDEX BG 140 HP is ideal for applications where high compressive and flexural strength is required. Depending on the water ratio, a compressive strength of up to 75MPa is achieved after 7 days and 90MPa after 28 days.

### Typical Applications

ARDEX BG 140 HP may be used for:

- Grouting applications where high performance is critical
- Critical equipment base plates, machine bases, equipment support
- Column bases (steel and precast concrete)
- Precast panel connections and between precast panels
- Underpinning
- 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 moisture loss to 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 140 HP 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

Fluid	18% - 19% water (3.6 - 3.8L)
Flowable	16% - 18% water (3.2 - 3.6L)
Plastic	13% - 16% water (2.6 - 3.2L)

The mixing ratio can be varied to achieve the right consistency for the job which can vary from a trowelable consistency to a pourable and fluid consistency. Always ensure that the BG 140 HP powder is added to the water during mixing. Measure and add 75% of the specified water to a suitable size bucket. Use an ARDEX approved mixer and slowly add all of the BG 140 HP powder and mix for 1 - 2 minutes or until uniform consistency is achieved. After this add the remaining 25% of the water and mix for another 1-2 minutes. The mix should be used immediately after mixing. 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

#### Plastic or Trowelable

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 curing compound.

#### Flowable and Fluid

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. It is recommended to apply an approved curing compound after final set on all exposed areas. Curing compounds should be applied onto the surface according to their respective Technical Datasheet. Alternatively plastic sheets or wet hessians can be used for a minimum of seven days. Improperly cured material may result in surface shrinkage cracks.

### PRECAUTIONS

ARDEX BG 140 HP is not to be used as a tile grout or in large, shallow areas where levellers or bulk fills are typically used. Do not add additional water to the specified amount. Apply grout in a continuous operation, even in large areas. ARDEX BG 140 HP is suitable for applications between 12mm and 100mm. Keep unrestrained areas to a minimum as this will

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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 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 140 HP 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)

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### TECHNICAL DATA

AS1478.2 Consistency	Fluid	Flowable		Trowelable	
Litres of water per 20kg bag (litres)	3.8	3.6	3.2	2.8	2.6
Water (%)	19	18	16	14	13
Coverage/20kg (litres)	10.8	10.5	10.1	9.9	9.8
Pot Life (minutes)	30	30	30	30	20 - 30
Wet Density (g/ml)	2.20	2.25	2.30	2.30	2.30
Final Set (hours)	~6	5 - 6	3 - 4	2 - 3	1 - 2
AS 1478.2 Flow Cone (seconds)	≤30	35	95		
AS 1478.2 Compressive Strength 24h (MPa)	19	22	31	38	40
AS 1478.2 Compressive Strength 7d (MPa)	50	55	65	70	75
AS 1478.2 Compressive Strength 28d (MPa)	65	70	75	83	90
AS 1478.2 Early Volume Change	Positive Expansion				
ASTM C1090 - 10 Hardened Volume Change	Positive Expansion				

**Note:** All values are approximate. Tested at 23°C in laboratory conditions.

**ARDEX Australia Pty Ltd**  
1300 788 780

**Toll Free Technical Services:**  
1800 224 070 (Australia)

**ARDEX New Zealand Ltd**  
0800 227 339

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