

PREMIER GROUT MP™

Date of Issue: 16/2/12

HIGH STRENGTH PREMIER GROUT MP will not shrink making it ideal for filling holes and voids in concrete for installing and repairing posts, bolts, pipe penetrations or structural underpinning.

Premier Grout MP is a Class A, non shrink cement grout that complies with AS MP20, Part 3 (1977). The product consists of a speciality blend of cement, graded aggregate and other chemically reactive agents. *Premier Grout MP* does not contain any ferrous material or Calcium Chloride.

Premier Grout MP is supplied in 20kg Bags as a ready to use dry powder. The addition of different amounts of clean water will produce a range of non-shrink grouts for placement at thicknesses of 10mm to 150mm in a single application.

RECOMMENDED USES

- All general purpose grouting
- Installing steel Balustrade Posts
- Grouting under precast and tilt slab panels
- Grouting ducts in post-tensioned concrete panels.
- Grouting machine and bearing base plates.
- Grouting:
 - Reinforcing Bars
 - Anchor Bolts
- Grouting in column bases
- Filling core holes, rod holes and defects in concrete.
- Fill-in grout for hollow concrete block walls.

FEATURES AND BENEFITS

- High Strength
- Non-shrink
 - Good dimensional stability
 - Complete void filling
- Versatile - Can be dry packed, rammed, trowelled, poured and pumped over short distances
- Economical, low in-place cost
- Ready to use, pre mixed, requires only the addition of water.
- Non-staining – chloride and iron free
- Lower water/cement ratio

- Reduced drying shrinkage
- Increased hardness and durability
- Reduces Permeability

TYPICAL PROPERTIES

See Page 4.

PRECAUTIONS

Cement based products are Not recommended for use in contact with Aluminium due to risk of alkaline corrosion. Ramset™ Epoxy Grout is recommended for installation of aluminium balustrade posts.

APPLICATION INSTRUCTIONS

Substrate and Surface Preparation

- The substrate surface must be clean, sound and free from oil, grease, curing compound or any loose materials.
- Surface must be mechanically abraded back to sound concrete.
- Ensure anchor-bolt holes are clean by blowing out dust and debris using compressed air or Ramset Hole Cleaning Pump (Part Number HCP).

Pre-Soaking

- Pre-soak concrete prior to application of *Premier Grout MP* for a minimum of 6 hours prior to grouting.
- Immediately before grouting remove excess water and blow all water out of anchor-bolt holes and routed cracks.

Base Plate

Remove all traces of rust, oil and grease. Provide air pressure relief holes in the base plate to allow venting so air is not trapped.

Formwork

Construct formwork so it is watertight using Ramset WaterSeal Silicone, Reid™ Formseal™ Silicone or similar or using Ramset FomoFill™ or FomoPlus™ self-expanding polyurethane foams.

Design formwork to enable rapid, continuous and complete filling of area to be grouted.

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Design formwork to allow gravity flow of grout between the base plate and foundation and ensure grout is kept in full contact with base plate and concrete substrate.

Unrestrained Surfaces

To prevent gaps forming, ensure the grout is restrained on all sides so that it expands against all surfaces.

Low Temperature Working

Cure rate and strength development rate is substantially reduced below 5°C.

High Temperature Working

- High temperatures may result in weak or cracked grout due to moisture loss or excessive internal heat generation (exotherm).
- At air temperatures above 35°C, use cool water (below 20°C) to mix grout.
- Keep all materials cool and away from direct sunlight, and shade area to be grouted with shade screens.
- If ambient temperatures are excessive, perform grouting in early morning or late evenings.

Consistency

Table 1. Litres of water per 20kg bag

	Dry Pack	Trowellable	Flowable
Range	2.0	2.5 – 3.0	3.5-4.0
*Test Levels	2.0	3.0	3.8

* Refers to the water content used to carry out performance testing

Mixing

- Select the quantity of water for the desired consistency (See table 1. or product packaging).
- Measure the quantity of clean water accurately and add to a container with at least 20L capacity per bag of grout.
- **DO NOT MIX BY HAND.**
- Mix *Premier Grout MP* using a mechanical forced action mixer with a high shear stirrer such as Ramset LSMP.
- Slowly add the dry *Premier Grout MP* powder while mixing.
- Continue to mix for approximately 1 minute after all grout powder is added. The grout consistency must be uniform and homogenous.
- **DO NOT ADD ADDITIONAL WATER.**
- Discard any unused grout that has stiffened or hardened.

Placing

- To ensure maximum expansion, place grout within 30 minutes of mixing at 20°C.
- Maximum thickness: 150 mm
- Minimum thickness: 10mm
- For section thicknesses > 150 mm, apply grout in several pours allowing the previous one to cool; dowelling between pours will provide better adhesion for subsequent topping.
- Avoid trapping air and water by placing grout from one side only
- Use a suitable head box to ensure void is completely filled and to ensure continuous flow
- To assist flow, rod the grout while pouring
- Do not use mechanical vibrators to assist grout flow as this will cause segregation of the aggregate and bleeding

Table 2. Setting Times

Vicat setting times at 20°C

	Trowellable
Initial Set	1.5 hours
Final Set	4.0 hours

CURING

Prevent moisture loss of hardened grout by applying water to the surface or covering exposed grout with wet Hessian, plastic sheeting or Ramset Concrebond or other curing compound.

Keep grout thoroughly moist for a minimum of 48 hours to prevent drying shrinkage and cracking. If required remove formwork after 24 hours and protect exposed grout from moisture loss as described above.

High wind conditions will affect the drying surface of grout; take precautions to protect the material from prevailing weather.

Refer to table 3 for compressive strength development.

Table 3. Compressive Strength Development

Age	Dry Pack	Trowellable	Flowable
1 day	40	25	15
3 days	60	45	25
7 days	65	55	40
28 days	70	70	50

AS2073-1977 @ 20°C.

CLEAN UP

Clean uncured *Premier Grout MP* from tools and equipment with clean water immediately after use.

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STORAGE

Store in a cool, dry place and prevent exposure to moisture and humidity.

Premier Grout MP will maintain a shelf life of 9 -12 months when stored correctly in its original packaging.

PACK SIZE & ORDER NUMBER

Pack Size: 20kg paper bag

Order Number: RPGMP

HEALTH AND SAFETY

Materials containing Portland cement are alkaline (corrosive)

- Avoid inhalation of dust
- Avoid contact with skin and eyes.
- Wear protective clothing, dust masks, gloves and eye protection
- Repeated or prolonged contact with cement products can cause skin irritation.
- If skin irritation occurs, remove contaminated clothing and flush skin thoroughly with water for a minimum of 15 minutes.
- If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes

- For more detailed information refer to the Material Safety Data Sheet. Call 1300 780 063 or visit the website www.ramset.com.au

FIRE

Premier Grout MP is non-combustible.

Because its composition is similar to concrete, *Premier Grout MP* is expected to have equivalent fire resistance.

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TYPICAL PROPERTIES

Table 1. Litres of water per 20kg bag

	Dry Pack	Trowellable	Flowable
Range	2.0	2.5 – 3.0	3.5-4.0
*Test Levels	2.0	3.0	3.8

* Refers to the water content used to carry out performance testing as indicated in the tables below.

Table 2. Setting

Vicat setting times at 20°C

	Dry Pack	Trowellable	Flowable
Initial Set	1.5 hours	1.5 hours	1.5 hours
Final Set	4.0 hours	4.0 hours	4.0 hours
Time for Expansion	- Start (plastic state)	-	30 minutes
	- Finish (plastic state)	-	2.0 – 2.5 hours
Unrestrained Expansion	-	>2%	>1.5%
Bleeding	0%	0%	0%

Test Methods:

- AS1012.18 for Setting times at 20°C and 50% RH
- AS2073 for expansions
- AS1012.6 for bleeding.

Table 3. Compressive Strength

Tested in accordance with AS1012.9, AS2073 at 20°C

Age	Dry Pack	Trowellable	Flowable
1 day	40	25	15
3 days	60	45	25
7 days	65	55	40
28 days	70	70	50

Table 4. Flexural Strength

Tested in accordance with ASTM C348-86 at 20°C

Age	Trowellable
1 day	8.5MPa
7 days	11.0MPa

Table 5. Yield

Approximate yields obtained if mixed in accordance with recommended procedures with accurately measured water content.

	Dry Pack	Trowellable	Flowable
Litres per 20kg bag	10.3	11.0	11.7
Fresh Wet Density ~kg/m ³	1,950	1,800	1,750
Bags required per cubic metre	96	90	87

For further information, please contact Ramset™

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