



APTC

Light Weight Patch

Technical Data Sheet

PRODUCT

APTC Light Weight Patch is a fine, light weight polymer modified mortar formulated for repairs to concrete or masonry, where a high build characteristic is required with intermediate compressive strength and thermal insulation and fire resistant properties are desired.

DESCRIPTION

APTC Light Weight Patch is a grey coloured patching mortar with excellent adhesion to most substrates. It is formulated with inert mineral fillers of low density that provide very high thermal protection to repairs. APTC Light Weight Patch can be applied up to 75mm thickness in one operation without slumping and with negligible shrinkage.

RECOMMENDED USES

- Patching and repairing damaged concrete.
- Repairs to vertical and overhead surfaces.
- Repairs to concrete or masonry where high non slump build is required in one operation.
- Fire protection of steel joiner plates and angle brackets.

FEATURES & BENEFITS

- One component product, just add water and mix.
- High build repairs from 10mm to 75mm.
- Excellent workability.
- Easy to use.
- High bond strength to concrete substrates.
- Reduces need for reworking after finishing.
- Durable.
- Insulating
- Fire resistant

YIELDS

The approximate yields are obtained if mixed in accordance with recommended procedures and accurately measured water content. A 10kg bag of APTC Light Weight Patch with 3.0 litres of water will yield approximately 20 litres.

PACKAGING

APTC Light Weight Patch is supplied in a 10kg polylined bag.

APPLICATION INSTRUCTIONS

SUBSTRATE & SURFACE PREPARATION

Saw, cut or cut back the extremities of the repair locations to a depth of at least 15mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 15mm up to sawn edge. Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae. Where breaking out is not required, roughen the surface and remove any laitance by light scabbling or grit blasting. Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition, paying particular attention to the back of exposed steel bars. Grit blasting is recommended for this purpose.

PRIMING

Where the substrate is very porous, pre-dampening with water should precede the application of one coat of Primer, scrubbing it well into the surface. APTC Light Weight Patch can be applied as soon as the primer becomes tacky. If the primer is too wet, vertical build up of the APTC Light Weight Patch may be difficult.

LOW TEMPERATURE WORKING

In cold conditions down to 5°C, the use of warm water (up to 30°C) is advised to accelerate strength development. Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrates or air temperature is 5°C and falling.

Physical Properties

Litres of Water per 10kg bag		
	Mouldable	Trowellable
Litres	1.5 - 1.8	2.2 - 3.0

Typical Compressive Strength		
Tested in accordance with AS1012.9 at 20°C and AS2073		
Age	Mouldable	Trowellable
28 Days	>15 MPa	>8 -15 MPa

APPROXIMATE SETTING TIMES		
Test Standard	Vicat setting times at 20°C	
Initial Set	20°C	2-3 Hours
	30°C	1.5—2 Hours
Final Set	20°C	4-5 Hours
	30°C	2-3 Hours

HIGH TEMPERATURE WORKING

At ambient temperatures above 35°C, the material should not be used as this will cause premature setting and make working with the product difficult.

MIXING

Care should be taken to ensure that APTC Light Weight Patch is thoroughly mixed with a mechanical forced action mixer with a high shear stirrer.

Add the required volume of drinking quality water into the mixing vessel and, with the mixer in operation, add one full 10kg bag of APTC Light Weight Patch and mix for 3 to 5 minutes until fully homogeneous.

Note that powder must always be added to water. Dependent on the ambient temperature and the desired consistency, the amount of water required will vary slightly.

DO NOT MIX BY HAND.

PLACING

Exposed steel reinforced bars should be firmly secured to avoid movement during the application process as this will affect mortar compaction, build and bond. Apply the mixed APTC Light Weight Patch to the prepared substrate by gloved hand or trowel. Thoroughly compact the mortar on to the primed substrate and around the exposed reinforcement. APTC Light Weight Patch can be

applied to 75mm thickness in vertical sections, but up to 100mm thickness in smaller pockets or with the use of formwork. If formwork is used, it should have properly sealed faces to ensure that no water is absorbed from the repair material. In horizontal locations, APTC Light Weight Patch can be applied up to 100mm in thickness.

If sagging occurs during application to vertical surfaces, the APTC Light Weight Patch should be completely removed and re-applied at a reduced thickness or lower consistency on to the correctly re-primed substrate.

Note: The minimum applied thickness of APTC Light Weight Patch is 10mm.

DO NOT ADD EXCESS WATER

FINISHING

APTC Light Weight Patch is finished by striking off with a straight edge and closing with a steel float. Wooden or plastic floats, or damp sponges, may be used to achieve the desired surface texture. The completed surface should not be overworked.

CURING

All cementitious based mortars have to be protected against too rapid surface drying and evaporation. APTC Light Weight Patch must be cured immediately after finishing in accordance with good concrete practice. The use of Primer sprayed, brushed or rolled on the surface of the

finished APTC Light Weight Patch in a continuous film, is recommended.

APPLICATION OF COATING

APTC Light Weight Patch, when cured, has good resistance to water penetration. However, if areas are subject to continuous water immersion or chemical attack from solvents, acids or the like, an Epoxy or Acrylic coating will act as a sealer and dust proofer which may be easily cleaned and is resistant to oil or chemical spills.

PRECAUTIONS

APTC Light Weight Patch should not be used when the temperature is below 5°C.

APTC Light Weight Patch should not be used in temperatures greater than 35°C.

APTC Light Weight Patch should not be applied less than 20mm thickness in any given application.

For concrete substrates subject to rising damp or moisture, a water proof membrane is required.

It is recommended that Sure Level Moisture Barrier be used as a primer (consult technical data sheet or Sure Level office).

New concrete surfaces must be at least 14 days old prior to application of APTC Light Weight Patch.

To avoid too rapid drying protect APTC Light Weight Patch from direct sunlight or drying winds during actual application, and while curing for up to 24 hours.

If the substrate on to which APTC Light Weight Patch is applied moves or cracks, reflective cracking will occur.

POT LIFE

Setting begins after 45 minutes (at 25°C substrate and ambient temperature). APTC Light Weight Patch should not be used after 45 minutes from time of mixing.

The addition of water to the mortar after it has started to stiffen is not recommended and the product should be discarded.

CLEAN UP

APTC Light Weight Patch should be removed from tools and equipment with clean water immediately after use.

STORAGE

APTC Light Weight Patch has a shelf life of approximately 8 months, if kept in a dry environment completely away from moisture.

HEALTH & SAFETY

This product is classified as hazardous according to criteria of Work Safe Australia. Material containing Portland Cement and sand now fall into this category.

Continuous or extended contact with this product may cause irritation as well as respiratory issues

such as bronchitis or silicosis.

During use avoid inhalation of dust, contact with skin and eyes.

Suitable protective clothing, dust masks, gloves and eye protection should be worn.

Continual or extended 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. Contact Poisons Information Centre or consult medical adviser.

Safety Data Sheets (SDS) are available on request from the office. Read the SDS and product data sheet carefully before using any product.

DISCLAIMER

Please Note: Recommendation and advice regarding the use of this product is to be taken as a guide only and APTC Australia shall not be liable for any inaccuracy in the information or for any loss, injury or damage whatsoever resulting from its use. To the full extent permitted by law, APTC Australia's liability is limited at its discretion, to the replacement of the goods or the supply of equivalent goods.

FIRE

APTC Light Weight Patch is non flammable.

DOCUMENT DATE

March 2017 (Rev 1)