

High strength patch repair mortar 3 - 40 mm

Uses

High strength patch repair mortar for repairing concrete surfaces. The rapid strength gain of Avista Concrete Patch Repair Compound minimises downtime. Can be used internally & externally.

Advantages

- Rapid strength gain - will generally accept pedestrian traffic at 16 hours
- High strength, abrasion and weather resistance
- Single component product eliminates site batching and requires only the site addition of clean water
- Excellent bond to the concrete substrate
- Shrinkage compensated
- Contains no chloride admixtures

Description

Avista Concrete Patch Repair Compound is supplied as a ready to use blend of dry powders which requires only the site addition of clean water to produce a highly consistent, high strength repair mortar. The material is based on a blend of cements, graded aggregates, special fillers and chemical additives to provide a mortar with good handling characteristics.

Properties

Results obtained at 23°C using 3.5 L of water / 20 kg bag.

Property	Typical result
Compressive strength (AS 1478.2 - 2005):	20 MPa @ 1 day 40 MPa @ 7 days 55 MPa @ 28 days
Modules of Rupture (Flexural strength) (AS1012.11 - 2000):	3.8 MPa @ 1 day 6.8 MPa @ 7 days 8.0 MPa @ 28 days
Indirect Tensile Strength (AS1012.10 - 2000):	2.2 MPa @ 1 day 4.1 MPa @ 7 days 5.0 MPa @ 28 days
Dimensional change (Drying shrinkage) (AS1478.2 - 2005):	< 500 microstrain @ 7 days < 1000 microstrain @ 28 days
Working life:	2 hours @ 23°C
Setting time at 23°C:	Initial set - 5 hours Final set - 7 hours
Traffic time:	
Pedestrian	30 hours @ 15°C 16 hours @ 23°C 12 hours @ 30°C
Vehicular	54 hours @ 15°C 24 hours @ 23°C 20 hours @ 30°C

Fresh wet density:	Approximately 2100 kg / m ³ dependent on consistency
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Design criteria

Avista Concrete Patch Repair Compound is designed for horizontal use. It may be applied up to a maximum thickness of 40 mm. Thicker sections can be built up in layers. The material should not be applied at less than 3 mm thickness.

When repairing areas greater than 5m² contact your local Parchem sales office for further information.

Application Instructions

Notes

To avoid possible reflective cracking in the Avista Concrete Patch Repair Compound, it is essential that live cracks and joints in the substrate be given proper attention. Due consideration must always be given to existing joint details and these must be followed through the Avista Concrete Patch Repair Compound; live cracks to be treated by an approved method. For further information, contact your local Parchem sales office.

Preparation

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, grit-blasting, scabbling or by needle-gun to form a good key.

Oil and grease deposits should be removed by steam cleaning, detergent scrubbing or the use of a proprietary degreaser. The effectiveness of decontamination should then be assessed by a pull-off test.

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 process.

Where corrosion has occurred due to the presence of chlorides, the steel should be high pressure washed with clean water immediately after grit-blasting to remove corrosion products from pits and imperfections within its surface.

The prepared area should be blown clean with oil-free compressed air.

Reinforcing steel priming

Apply one full coat of Nitoprime Zincrich to all exposed reinforcing steel and allow to dry before continuing. If any doubt exists about having achieved an unbroken coating, a second application should be made and, again, allowed to dry before continuing.

Substrate priming

The substrate should be thoroughly soaked with clean water and any excess removed immediately prior

Avista™ Concrete Patch Repair Compound 3 - 40mm

to priming. Any areas of the substrate which dry out before application of the primer must be re-dampened before continuing.

Thoroughly scrub Avista Resurfacing Primer diluted (1 part modifier and 2 parts water) into the dampened surface taking care to ensure complete coverage particularly around the edges.

Apply the topping whilst the Avista Resurfacing Primer is still tacky. The priming operation must be repeated if the initial coat has dried out.

Mixing

Care should be taken to ensure that Avista Concrete Patch Repair Compound is thoroughly mixed. A forced action mixer is essential. Mixing in a suitably sized drum using an approved spiral paddle in a slow speed (400/500 rpm) heavy duty drill is acceptable for the occasional one bag mix. Free-fall mixers must not be used. Mixing of part bags should never be attempted.

Place 2.8 - 3.5 litres of drinking quality water into the mixer and, with the machine in operation, add one full 20 kg bag of Avista Concrete Patch Repair Compound and mix for 3 minutes until fully homogeneous. Note that powder must always be added to water.

For larger areas, water should be mixed 50:50 with Avista Resurfacing Primer, for example, 1.75L of water and 1.75L Avista Resurfacing Primer to yield a 3.5L mix per 20kg bag.

Application

The mixed Avista Concrete Patch Repair Compound must be applied onto the primed surface before it dries. Areas which dry too soon must be scrubbed clean and reprimed exactly as described above before continuing.

Apply the mixed Avista Concrete Patch Repair Compound onto the primed substrate as soon as possible after mixing. The mortar should be applied evenly by trowel and tamped in place with a wood float to ensure full compaction. Thoroughly compact the mortar around any exposed steel reinforcement. Avista Concrete Patch Repair Compound can be applied up to 40 mm thickness in single applications.

Build-up

Sections greater than 40 mm thickness can be achieved by application of multiple layers. In this instance, the surface of the intermediate layers should be scratch-keyed, covered with polythene sheeting secured at the edges, and allowed to set for a minimum of 7 hours (at 23°C) before continuing. Repriming as described above and a further application of Avista Concrete Patch Repair Compound may proceed at this time.

Finishing

Avista Concrete Patch Repair Compound should be struck off to the correct level and finished with a steel trowel to fully close the surface. The completed surface should not be overworked. If overcoating with resurfacing product, strike off with a straight edge and then finish with a wooden float to provide a good key.

Low temperature working

In cold conditions down to 10°C, the use of warm water (up to 30°C) is advisable to accelerate strength development. Normal precautions for winter working with cementitious materials should then be adopted. The material should not be applied when the substrate and/or air temperature is 10°C and falling. At 10°C static temperature or at 10°C and rising, the application may proceed.

High temperature working

At ambient temperatures above 30°C, the material should be stored in the shade and cool water used for mixing.

Curing

Avista Concrete Patch Repair Compound is a cement-based repair mortar. In common with all cementitious materials, Avista Concrete Patch Repair Compound must be cured immediately after finishing in accordance with good concrete practice. Plastic or wet hessian is recommended if the Avista Concrete Patch Repair Compound is to be overcoated with a decorative resurfacing finish.

Overcoating with protective finishes

Avista Concrete Patch Repair Compound is extremely durable and will provide an excellent hard wearing surface to the repaired locations. A decorative resurfacing finish may be applied over the repair area after approximately 4 - 6 hours.

Cleaning

Avista Concrete Patch Repair Compound and Avista Resurfacing Primer should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

Limitations

- Not to be used when temperature is below 10°C and falling.
- Do not mix part bags.
- Should not be exposed to moving water during application. Exposure to heavy rainfall prior to the final set may result in surface scour. If any doubts arise concerning temperature or substrate conditions, consult your local Parchem branch.

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Estimating

Supply

178186	AVS PATCH REPAIR COMPOUND 3-40MM 20KG
322100	NITOPRIME ZINC RICH 1L
178047	AVS RESURFACING PRIMER 10L
178184	AVS SOLVENT 4L
178182	AVS SOLVENT 10L
178183	AVS SOLVENT 20L

Coverage and yield

Avista Concrete Patch Repair Compound:	At 3.5 litres of water will yield approx 11.2 litres of ready to use product. This will cover approx 0.28m ² at 40 mm thick
Nitoprime Zincrich:	7 m ² / litre (approx.)
Avista Resurfacing Primer:	6 - 8 m ² / litre

Note: the actual yield per bag of Avista Patch Repair Compound will depend on the consistency used. The actual coverage rate of Avista Patch Repair Compound will vary dependent on the texture and porosity of the substrate. The coverage figures for other products are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Shelf life

12 months if kept in a dry store in the original, unopened bags or packs.

Storage conditions

Store in dry conditions in the original, unopened bags or packs. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to 4 - 6 months. Avista Patch Repair Compound should be protected from frost.

Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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