MoVeX

Supplying the world's leading
expansion joints and construction materials

RENUE SERIES

MVX Fast Patch

Rapid-setting High Impact Repair Mortar

MVX Fast Patch is a ready to use blend of dry powders and graded aggregates which requires only the site addition of clean water to produce a highly consistent, high strength, free-flowing and rapid-setting patch repair mortar.

The material is a blend of inorganic cements, special fillers and chemical additives to control the rate of strength gain to provide a fluid micro-concrete with good handling characteristics. Its self-compacting property eliminates honey-combing and voids.

High Abrasion Resistance

High Impact Resistance

Excellent Weather Resistance

High Vehicular Strength

TECHNICAL DATA

Properties	Typical Value
Compressive Strength (Tolerance +/- 10°C	30 N/mm² @ 4hrs 40 N/mm² @ 1 day 50 N/mm² @ 7 days 60 N/mm² @ 28 days
Setting Time	Initial Set: 10 to 15 mins Final Set: 30 to 40 mins
Traffic Time	Pedestrian: 1 to 2 hrs Vehicular: ≈ 4 hrs
Flexural Strength	30 kg/cm² @ 4 hrs 55 kg/cm² @ 7 days

AREA OF USE

- For internal and external
- For emergency reinstatement of damaged or deteriorated concrete
- For horizontal use but can also be used vertically with the aid of formwork
- Ideal for repairs to airport runways, aprons and areas where wheeled traffic required fast return to service

Packaging

30kg Powder Bag

Shelf Life & Storage

12 months in unopened condition. Store in a cool-dry covered place and avoid direct exposure to sunlight.

Design Criteria

MVX Fast Patch is suitable for use at nominal thickness of 100mm. Thicker sections up to 250mm may be applied by the addition of graded silt free coarse aggregate.

The material should not be applied at less than 20mm thickness. Aggregate should not be added at applied thickness between 20mm and 100mm without specific advice. Horizontal surface areas should be restricted to bay sizes not exceeding 4m² and 12m² where filled with aggregate.

Preparation

Saw cut or cut back the extremities of the repair locations to a depth of at least 20mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 20mm up to the sawn edge.

Ensure the surface is free of any laitance, dirt, oil, wax or debris which may prevent the MVX Fast Patch from properly adhering to the surface.

Dry the surface completely before application. Temporary formwork should be fitted tightly into all existing pavement and floor joints which about the repair zone in order to prevent grout loss during the repair process.

Saturate the prepared concrete substrate by flooding with potable water prior to placing. Remove the water leaving the substrate fully saturated immediately before applying MVX Fast Patch.

Mixing

Ensure MVX Fast Patch is thoroughly mixed. Use a forced-action mixer to mix in a suitably sized drum using a spiral paddle in a slow speed (400/500 rpm) heavy-duty drill is acceptable. Free-fall mixers must not be used. Mixing of part bags should never be attempted.

Ensure adequate labour and machine mixing capacity to enable the placing operation to be carried out continuously.

Measure 5 to 5.5 litres of drinking quality water and pour 3/4 into the mixer. With the machine in operation, add one full 30 kg bag of MVX Fast Patch and mix for 1 minute before adding the rest of the water. Mix for a further 3 to 4 minutes until a smooth even consistency is obtained.

Note that powder must always be added to water. The quantities mixed may be scaled up as required.

When the drill and paddle mixing method is used, the complete measured volume of water should be placed in the mixing drum. With the paddle rotating, add one full 30kg bag of MVX Fast Patch and mix for 3 to 5 minutes until a smooth even consistency is obtained.

It is recommended that the mixed product be passed through a suitable coarse metal screen prior to placing or pumping to highlight any unmixed material.

Placing

The mixed material should be placed within 10 mins of mixing in order to gain the full benefit of fluidity. Each repair should be poured or pumped in a single continuous operation. Repair may be surface finished using a trowel or wood float. If a textured surface is required, this can be achieved using a suitable roller or brush as the material begins to stiffen. The completed surface should not be overworked. MVX Fast Patch can be applied up to 100 mm thickness in a single application.

For repair sections deeper than 100mm, it would be necessary to fill-out MVX Fast Patch with suitable and properly graded aggregate in order to minimize temperature rise. Aggregate should be in a saturated surface dry condition. The quantity of aggregate required will vary dependent on the nature and configuration of the repair location.

Generally, for sections between 100mm and 250mm deep, the following mix designs should be considered.

MVX Fast Patch:	30kg
Clean Water:	4.7 to 5.2L
Aggregate:	12.5kg of 8 to 12mm
Zone 2 Sand:	7.5kg

Adding above materials can influence the Compreesive and Flexual strength result. Site trial is needed to check the result.

The water demand may vary dependent on the condition of the aggregate. To place the filled MVX Fast Patch at the lower water content, the use of a vibrating poker is desirable, to aid compaction. The quantity of aggregate should never exceed 1 part aggregate to 1 part MVX Fast Patch (by dry weight). Trial mixes should be made in order to ensure the optimum addition of both water and aggregate.

Note: The minimum applied thickness of MVX Fast Patch is 20mm. Aggregate should not be added at applied thickness between 20 mm and 100mm.

Low Temperature Working

In cold conditions down to 5°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 below 5°C. At 5°C static temperature or at 5°C and rising, the application may proceed.

High Temperature Working

At ambient temperature above 30°C, the material should be stored in the shade and cool water used for mixing. The best application is during night time to avoid over evaporation of water that can cause cracking.

Limitations

MVX Fast Patch should not be used when the temperature is below 5°C. Do not mix part bags. The product should not be exposed to moving water during the application. Exposure to heavy rainfall prior to the final set may result in surface scour.

Cleaning

All tools and equipment must be cleaned immediately with clean water after use. Hardened material can only be removed by mechanical means.

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