MVX FastPatch SC

DESCRIPTION

MVX FastPatch SC is available as a dry powder mix requiring the addition of clean water and 0.8-1.2 mm slurry-free dry aggregate to produce a highly consistent, high strength, free-flowing repair concrete which self-compacts. The material is a mixture of inorganic cements, special fillers and chemical additives to control the rate of strength gain.

ADVANTAGES

- High strength
- Rapid strength gain
- Abrasion
- Weather resistance
- Contains no chloride admixtures

USES

For emergency repair of damaged or weathered concrete. This material is perfect for repairing runways, aprons and areas where traffic needs to be returned to service immediately. It may be used internally and externally. For the reinstatement of very large areas of concrete pavements and floors.

DESIGN CRITERIA

MVX FastPatch SC is designed for horizontal use, but can also be used vertically with formwork support. It is suitable for use at nominal thickness up to 200 mm with additional of 8 – 12 mm coarse aggregate. The material should not be applied at less than 20 mm thickness. Horizontal surface areas should be restricted to certain patching area and or good civil road practice to avoid crack. Consult Movex office for further information.

TYPICAL PROPERTIES

The following results were obtained at water: powder ratio of 0.1 and temperature of 25+/-2 °C. No aggregates added.

Compressive strength:

ASTM C109/C109M	**25 - 35 N/mm^2 @ 1 days**
	36 - 45 N/mm^2 @ 7 days

MVX FastPatch SC

Setting time :

Initial set	**30 – 40 min**
Final set	**60 – 90 min**

Traffic time :

Pedestrian	**+/- 2 hours**
Vehicular	**Approx. 4 hours**

APPLICATION

Preparation :

Cut or trim the repair site to a depth of at least 20mm, if breaking is not required, roughen the surface then clean the surface and remove dust, plaster, oil, paint, grease, corrosion deposits or algae in the repair area.

The prepared area should be blown clean with compressed air.

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

Substrate Priming :

Before placing, the prepared concrete substrate must be flooded with clean water. Immediately prior to application of MVX FastPatch SC, water must be removed leaving the substrate fully saturated.

If the area is not flooded, then you must use a Bonding Agent. MVX FastPatch SC can be applied as soon as the Bonding Agent becomes sticky.

Mixing :

After added dry aggregates, Site trial should be done to calculate correct amount of water added in order can have slump flow arund 65 – 75 cm, at 25+/-2 °C The quantity of aggregate should never exceed 1 part aggregate to 1 part MVX FastPatch SC (by dry weight). Trial mixes should be made in order to ensure the optimum addition of both water and aggregate.

Care should be taken to ensure that MVX FastPatch SC 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.

Measure the volume of water and pour three quarters into the mixer. With the engine running, add a bag full of MVX FastPatch SC and stir for 1 minute before adding the remaining water.

Mix for 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 bag of MVX FastPatch SC and mix for 3 to 5 minutes until a smooth even consistency is obtained.

Placing :

The mixed material must be placed within 20 minutes of mixing to take full advantage of the fluidity. After the mixture is poured the surface can be leveled using a trowel or wood float. Water requirements may vary depending on aggregate conditions. If the MVX FastPatch SC uses a lower water content, it is recommended to use a vibrator to assist the compaction process. The amount of aggregate used must not exceed the total weight of MVX FastPatch SC (by dry weight).

Low Temperature Working :

The material should not be applied when the substrate and/or air temperature is below 5 °C.

If the conditions are cold up to 5 °C, then you must use water with a warm temperature (up to 30 °C).

High Temperature Working :

At ambient temperatures above 30°C, the material should be stored in the shade and use cold water for mixing. In hot weather, it is recommended to apply at night to avoid evaporation of excess water which can cause cracking.

Curing :

MVX FastPatch SC is a cement-based product. In common with all cementitious materials. MVX FastPatch SC must be cured immediately after finishing in accordance with good concrete practice.

Cleaning :

MVX FastPatch SC should be removed from tools, equipment and mixers with clean water immediately after use. Cured material can only be removed mechanically.

ESTIMATING

Supply MVX FastPatch SC 30 kg/bags.

Note : The actual yield per bag of MVX FastPatch SC will depend on the consistency and aggregates used. The coverage figures for liquid products are theoretical- due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

STORAGE

Shelf Life

MVX FastPatch SC products have a shelf life of 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 self-life will be reduced.

Note : MVX FastPatch SC are non-flammable.

PRECAUTIONS

Health and safety

MVX FastPatch SC contains cement powder which, when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of dust and contact with the skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately-do not induce vomiting.

Ensure adequate ventilation and avoid inhalation of vapors. Some people are sensitive to product. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used.