FIELD TESTING OF VIAFIX

The aim of this basic assessment of the VIAFIX is to compare its performance over a period of 3 months with that of locally manufactured COLDMIX which is generally used and manufactured on demand. The approached was to compare it with an on-site prepared COLDMIX done in a roadworks field laboratory. This assessment is not meant to be an in-depth research but to verify its performance on site.

The background to the use of pothole repair products is that it offers mending on a short term basis. It is also just meant for use in "holes" and not so much where long sections under rutting occurs. In these more serious cases road repair work will be necessary on a medium maintenance basis before proper rehabilitation or reconstruction is attempted to extend a road or street's design life. This product is thus considered to be a "pothole repair" product for use in short term maintenance efforts until it becomes necessary for medium term maintenance. The time between short term and medium term will differ pending the traffic volumes and can also be used as an intervention to extend this period to a point. Potholes thus have an important role and place to fulfil in road maintenance as a whole and where financial consideration plays a role.

One sealed 14kg sample of VIAFIX was received. Testing was done during a current roadworks project using the field laboratory and staff. Two potholes were prepared in the wheel path of construction machines entering and exiting the project's construction camp daily. The construction machines varies between 5t and 60t loads.

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The sample size of the VIAFIX is too small to do a full range of tests but for the purpose of this exercise was enough. It was possible to do a grading on the aggregate and bitumen content which are the basic materials of these products.

Analysing the two mixes it was found that VIAFIX has a finer aggregate grading (more fines) and less bitumen (7.9% against 8.1%). The basic materials is thus about the same. There is however an unknown additive in the VIAFIX which was not possible to establish. This substance is the cause why VIAFIX is more workable, dense, and hardening faster than COLDMIX.

VIAFIX

VIAFIX SAMPLE RECEIVED

TEST SAMPLE TAKEN FOR LBORATORY TESTING

Two potholes were prepared. The smaller one was for the VIAFIX sample and the larger one for an on-site prepared COLDMIX.

POTHOLES CREATED

VIAFIX POTHOLE FILLED

MATERIAL LEVELED

MATERIAL HAND COMPACTED

The workability (placing and compaction) of the VIAFIX is superior to that of the COLDMIX.

COLDMIX

LABORATORY COLDMIX SAMPLE

COLDMIX POTHOLE FILLED AND COMPACTED IN TWO LAYERS

MATERIAL LEVELED

In both products water did not affect its placing and stability.

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POTHOLES' APPEARANCE AFTER HAND COMPACTED

COMPACTED POTHOLES AFTER FINAL COMPACTION
USING A 2t LIGHT VEHICLE DRIVING OVER IT 5 TIMES (in place of plate compactor)

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APPEARANCE

COLDMIX APPEARANCE

VIAMIX APPEARANCE

VIAMIX has a more dence appearance and shows a better seal around the edges.

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APPEARANCE AFTER 3 MONTHS

BOTH POTHOLES' APPEARANCE AFTER 3 MONTHS

Note COLDMIX edges are coming "loose" while the VIAMIX still binds solidly around the edges. This is important as the aim is that water must not penetrate the pothole again which will cause a new pothole to form next to the repaired one. The rough surface of the COLDMIX is also an indication that the material is slowly eroding and stripping under traffic. In addition a dent will form eventually causing water puddels that will seep down to the bottom of the hole loosening the fill material altogether.

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BOTH POTHOLES’ APPEARANCE AFTER 3 MONTHS

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CONCLUSION

In this basic assessment the VIAMIX appear to be a superior product and can be applied with success to the repair of potholes on roads and streets. It was noted that it fills and penetrate the edges and indents of the hole better as its inherent capacity to be still “soft” under the hardened surface after a day will still settle and seal all irregularities with the help of traffic. In comparison the COLDMIX do not have these capabilities and will have a much shorter lifespan.

It is also expected that the shelf life of the VIAMIX due to the additive will be much longer that COLDMIX which is normally manufactured on demand and cannot be stored over long periods. VIAFIX could offer a better financial return due to its performance of note.

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