



AD-here LOF 65-00[®] with CECABASE[®] RT 945

Project Profile – AD-here Mix Additive, Fort Worth, TX

Project Location: US 287, Fort Worth Texas
Contractor : APAC Texas Bitulithic
Date Placed: October 2012

A warm mix trial was run October 3, 2012 by APAC-Texas Bitulithic located in Dallas, Texas. The project site was on US 287 in Fort Worth going south. The plant used was a 300 TPH drum plant located in Fort Worth within 7 to 8 miles of the project. The asphalt mix was a TxDOT type D fine mix which would be similar to a 9.5 mm superpave mix. It incorporated 15% RAP and 5% RAS. David Morton, the quality control manager for APAC-Texas Bitulithic, had set up the trial with NCAT for study of the impacts of the RAS and RAP combination. APAC-Texas Bitulithic decided as well to incorporate the warm mix additive to check it with the RAP/RAS combination. The warm mix additive was AD-here LOF 65-00 fortified with Cecabase RT 945 @ 0.5% by weight of asphalt binder. APAC-Texas ran the same mix the previous evening without any warm mix additive in order to compare and contrast the performance of the additive.



The paver was a TEREX CR-552 with a MOBA IR bar for temperature control. Two Sakai SW 900 steel wheel rollers were used as the breakdown and the finish roller while a Sakai GW750 vibratory pneumatic roller was used as well. A Roadtec Shuttle buggy was used to convey the mix to the paver. Weather was similar on both nights of paving. On the night of the warm mix trial, the pavement temperature was 77°F with an ambient temperature of 81°F at the start of the project, which was 9:15 pm.

On the first night of paving without the warm mix additive, temperatures at the plant were 315°F to 320°F. The mix delivered to the project had recorded temperatures of 292°F to 297°F. The following night when APAC used the warm mix additive, temperatures at the plant ran 260°F to 265°F with mix at the screed running 240°F to 245°F. Temperatures were taken with both a handheld temperature gun as well as an IR bar on the back of the paver. APAC-Texas Bitulithic used the same rolling pattern both nights in order to take variability out of the test.



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The mix that did not use the warm mix additive yielded roadway core results of 91.5 % density, or 8.5% air voids. The mix that used the warm mix additive had a set of roadway cores averaging 92.9% density or 7.1% air voids. This is a positive change of 1.4% density for the same amount of compactive effort. The field technician that APAC had on the road the night of the trial noted that the mix was rolling in with relative ease according to his nuclear density gauge and he did not see any difficulty with the mix. On both nights the mix performed well in the laboratory.

With the same compactive effort, an increased density of 1.4% was achieved.

Conclusion: In addition to the improved densities noted above, the additive proved very workable and was able to reduce plant temperatures 50°F to 60°F from standard hot mix with no difficulty. The plant ran consistently at temperatures of 260°F to 265°F, delivering screed temperatures of the mix at 240°F to 245°F. The mix rolled in well with the same patterns that they currently employ and yielded satisfactory laboratory volumetrics. Finally, David Morton, the quality control manager for APAC-Texas Bitulithic, considered the trial a success and finished out the project with the additive and will continue its use in future projects.



Additional Information:

To request additional product technical information or samples, contact a Road Science Representative at 877 354 1851.