



SAMI SOLUTIONS

SAMiflex 'E'

Lake Macquarie City Council



SAMiflex Solution No. 2



While emulsion binders like Samiflex "E" carry a small premium over hot bitumen binders, this is more than offset by the increased utilisation of plant and labour, said Lake Macquarie's Ray Milliss.

SAMI adds flexibility to spray sealing operations

The development of high residual (HR) emulsion binders which can be used in cool and damp conditions has made it possible for councils in Australia to carry out road maintenance work almost all year round.

One council which has gained a lot of experience in the use of HR emulsion binders during the past couple of years is Lake Macquarie City Council, based at Boolaroo in the Hunter Valley region of N.S.W.

The Council's Surfacing Co-Ordinator, Ray Milliss, and Seal Ganger, John Wilkes, both agree that while HR emulsion binders like

Samiflex "E" carry a small premium over hot bitumen binders, this is more than offset by the increased utilisation of plant and labour.

"They give us much greater flexibility and make it possible for us to spray seal almost all year, as long as it is not raining", said Ray.

"In our experience, the key when using HR emulsion binders is the rolling operation, particularly back rolling.

"Once that operation is completed satisfactorily, the road can be re-opened, as long as the speed of the vehicles is kept fairly low for

the first couple of hours.

"We've also just recently used Samiflex "E" on some very steep hills and sharp bends and experienced no run-off from the edges into the gutters".

Ray also cites environmental issues as being factors which influence his decision to use HR emulsion binders.

"Being water-based, they are more environmentally-friendly than cut-back bitumens. They don't require as much energy to use, they don't fume or release hydrocarbons into the atmosphere and I believe it



The water content of the emulsion binder vapourises during spraying.

won't be long before more councils start looking at using them on a more regular basis.

"We've had a number of fellow council engineers visit to inspect our progress and they have all been very impressed at our workrate when using HR emulsion binders.

"Overall, they are a very versatile product and we have been so impressed by their performance, that we are now considering using them in preference to hot bitumen throughout the year, not just during cooler months", concluded Ray.

Commenting on how the use of Samiflex "E" has enabled him and his crews to increase their productivity, John Wilkes, said: "While we may not actually complete jobs any quicker, we certainly get through more work each day as we are able to get

started much earlier instead of waiting around for the temperature to warm up.

"This is particularly so during the months affected by daylight saving when it can remain quite cool and damp right through till mid-morning", he said.

"The use of HR emulsion binders also helps to make the entire operation much safer", added John.

"There's not the same need for the crew to be working on top of each other as we have more time to work the aggregate into the surface and the HR emulsion doesn't need to be heated to anywhere near as high a temperature as bitumen".

Samiflex "E" is a Cationic Bitumen Emulsion specifically designed for spray sealing applications.

If required for SAM or SAMI applications, a per-

centage of SBS Polymer - up to 8% - can be added to modify the residual binder, and the product has a solids content of between 75% and 80%.

It is available from SAMI in bulk and can be sprayed by conventional bitumen sprayers in single or two-coat applications. Alternatively, it can be supplied and sprayed by SAMI Road Services, which is the option chosen by Lake Macquarie City Council.

When spraying, Samiflex "E" requires a minimum pavement temperature of about 5°C and rising and it can be used in damp conditions.

Applied at a nominal temperature of around 85°C, it is designed for use with precoated aggregates and the formulation can be made to suit any residual binder specifications.

This Case Study was prepared with the kind assistance of Lake Macquarie City Council.



For further information on any of the products featured in this Case Study or any of SAMI's other specialist road maintenance products and services, please contact:

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