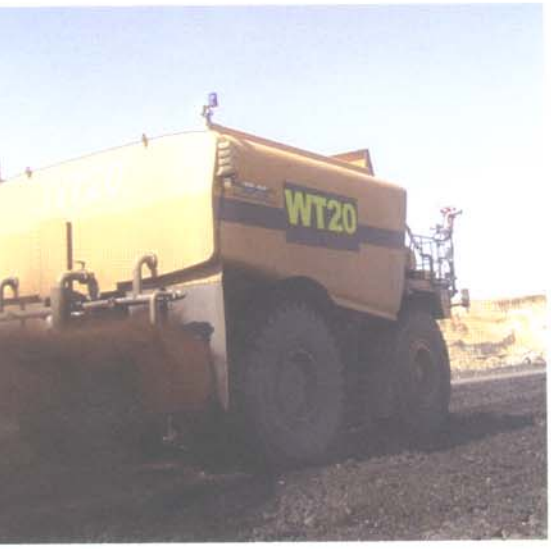
Secret ingredient



A mixture of bitumen and water could bring big benefits to miners.

FANCY cutting water consumption, reducing fuel use and getting on top of haul road dust? The Queensland inventor of a bitumen emulsion dust control solution reckons he can deliver on all three points.

Sunshine Coast-based Cooee Products managing director Tony Pynsent is the brainchild behind Cooee DustBloc, a non-toxic special additive-boosted formula that he said could reduce water consumption at some mines by up to 90%.

Diluted with water (at a suggested ratio of 20:1), DustBloc is sprayed on haul roads and dries in about two minutes, leaving a bitumen film that adheres to the dust particles. These dust particles then become heavier and less likely to become airborne when the trucks start rolling.

First created by Pynsent, the dust-suppressing product sparked wide interest after being showcased on *ABC TV's The New Inventors* program in 2005. Following his 15 minutes of fame, the inventor was directly approached by BHP Billiton, which went on to provide further assistance in the development of the product and are now, along with fellow industry giant Rio Tinto and some smaller mining players, happy DustBloc customers.

> "Bitumen's classed as a 'water in oil' emulsion, but what I've done is create an 'oil in water' emulsion." - Cooee Products managing director Tony Pysnent

The Pynsent-created special additive is manufactured by Cooee, while international paving specialists Pioneer Road Services takes care of the blending process and distribution, to serve DustBloc's almost exclusively mining sector customer base. Most mines utilise the product for haul roads but according to Pynsent, it could equally be used for stockpile dust control.

Understandably tight-lipped about his top secret ingredient, Pynsent told *Australia's Mining Monthly* the diluted formula worked by releasing the bitumen from the water-based emulsion in an amount suitable for dust suppression.

"Bitumen's classed as a 'water in oil' emulsion, but what I've done is create an 'oil in water' emulsion. This means the formula is able to be diluted in water and that it can go through a pump or spray system," he explained, adding that he was excited to learn that one mine operation was about to apply DustBloc to a tailings dam using a crop duster.

According to Cooee, the traditional dust control method of using water could often require 10 treatments a day on dusty haul roads. In contrast, Pynsent said, using DustBloc would mean the same roads would need only one application a day. This saves on application time, maximises productivity, reduces truck fuel usage and cuts water consumption drastically.

In addition, Pynsent would one day like to have the evidence to support his theory that DustBloc reduces truck tyre wear but said multiple road use made it difficult to gather conclusive data.

At about $1.30 for a litre of DustBloc, the cost outlay sits well with the potential cost savings and improved efficiencies offered to mines. Pynsent said each square metre of road requires about a quarter of a litre of diluted spray for treatment. AMM