DUSTAT

CERTIFICATION OF ENVIRONMENTAL & OCCUPATIONAL EFFICACY

Dustat is based on modified wood polymer (lignin) technologies, and is safer to use for road stabilisation and dust control than any competing class of chemicals. Lignin is a complex organic polymer found in the tissues of plants. It is nature's binder and exists in the cell walls of plants – it is the binder that makes the cell walls sturdy and strong.

As such, the overall impact on the environment from applying Dustat to roads is negligible, toxicity towards plants is insignificant and Dustat is non-toxic to animals.

Lignosulfonates have been applied to roads, used in animal feeds and converted into human foods for more than 40 years without toxicity or environmental concerns. People consume lignin every day, in the cells walls of the fruits and vegetables included in their diet.

Environmental responsibility.

Dustat is renewable, bio-based, and sustainable. Based on published data for lignosulphonates, Dustat displays the following environmental credentials:

- **Biodegradable:** The sugars and carbohydrates which make up 35% of the Dustat chemistry are very quickly degraded. The residue is purer lignin. It is degradable, but persists longer as a non-toxic, compressible road binder, interacting with soil particles, holding them together at the surface and suppressing dust generation.
- **Low Marine Toxicity:** The cut-off point for LC50 96-hour values for marine (fish) toxicity is taken as 1000mg/Lt. Compounds with values greater than this are given a value of >1000 and are considered to have a low order of toxicity The calculated LC50 96-hour value for Dustat is against rainbow trout 3,700.
- **Plant Friendly:** Dustat is a plant based product that will not detrimentally affect vegetation. It is not phyto-toxic and may be used to stabilise and protect soil around new plantings.
- **Mammalian toxiciy:** Dustat is considered to be non-toxic according to the Occupational Safety and Health Administration (OSHA) ruling. Dustat contains no volatile organic compounds or no recognised toxins of any kind.

PRODUCT	TEST LAB	DATE	ORAL TOXICITY ON WHITE RATS LD 50g/kg	RABBIT SKIN IRRITATION INDEX	RABBIT EYE IRRITATION SCORE		
					24 hrs	48 hrs	72 hrs
Dustat	Brockman	2009	<10	0	0	0	0

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- **No ground water contamination:** Data indicates that application rates of up to 30 times the recommended usage produce no problems to ground water.
- **No trace element toxicity:** Dustat contains no detectable levels of the EPA listed hazardous toxins.
- **Environmentally Benign:** Dustat in no way contributes to greenhouse gas generation or ozone depletion.
- **Non-corrosive:** Dustat is non-corrosive to equipment and infrastructure.

Conclusion

Dustat is based on a natural material extracted from timber processing. The product is biodegradable and biologically friendly. The use of Dustat for dust control and road stabilisation is environmentally safe, and is more "environmentally friendly" than any other dust control mechanism.

Certified by BJ McLean,
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