



DusTech Improves Air Quality and Saves A Construction Site 360,000 Liters of Water Per Day

As dust suppression becomes mandatory due to health and environmental concerns, MetaFLO's fast-acting biopolymer provides a low-cost and efficient solution for improving air quality on construction sites.

CASE STUDY



PROJECT

DUSTECH – DUST SUPPRESSION ON CONSTRUCTION SITE

Nova Iguaçu de Goiás, GO - Brazil

DUSTECH

MetaFLO Technologies

Challenge

Excessive airborne dust particulate matter caused by civil works has increasingly become an environmental and health concern. Dust harms the environment, compromises human health, negatively affects communities and reduces overall business productivity. Traditional methods for dust suppression usually require large amounts of water—typically 5-9 water trucks per day—which is costly both logistically and environmentally.

Solution

MetaFLO first applied 3.0% of DusTech biopolymer, which was diluted directly in a water truck and applied with a lateritic gravel and silt soil characterization. By promoting greater agglutination between soil particles, DusTech significantly reduces dust suspended in the air. It creates a layer on the surface of the soil that minimizes the release of fine particles into the air through a clumping process. A second layer was applied after 17 hours, with a 2.0% dosage.

Outcome

- ✓ **COST SAVINGS**
 - By using DusTech, costs of labor and machinery were cut by 50%, as were fuel consumption and emissions of polluting gases.
- ✓ **WATER SAVINGS**

Water consumption on this project decreased by 50% with DusTech, saving 360,000 liters of water per day and reducing the need for additional surface moistening.
- ✓ **QUALITY OF THE ROAD**

MetaFLO's biopolymer resulted in better agglutination of the soil, enhancing road safety, increasing traffic visibility and improving the air quality for employees, the environment and the surrounding communities.





Figure 1: Before DusTech

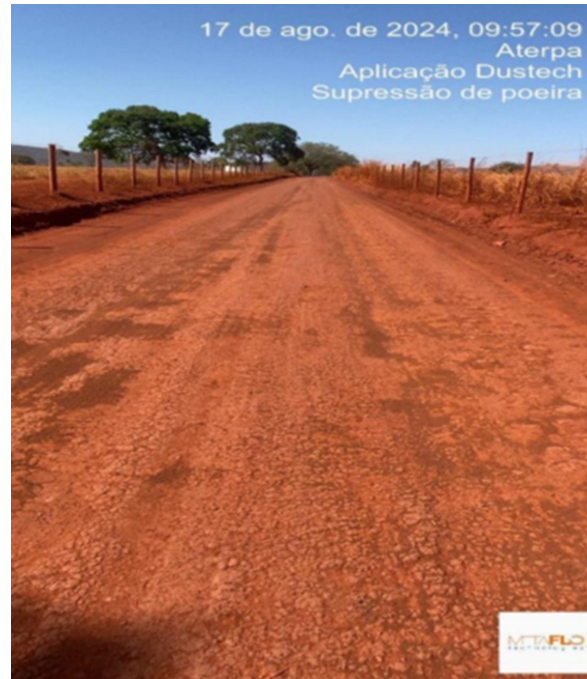


Figure 2: After DusTech