

Golden Drop Nanotechnology Based Anti-stripping agent

Product Name: GD-NSA-12, Stock No.: GD-2023-110

Antistripping agents are typically used in asphalt mixtures to improve the adhesion between asphalt binder and aggregates, reducing the likelihood of moisture-induced damage and stripping (loss of adhesion). While conventional anti-stripping agents are based on various chemicals, the idea of utilizing nanomaterial's for this purpose could have several potential advantages, such as improved performance and durability.

Nanotechnology-based anti-stripping agents are designed to enhance the bond between asphalt binder and aggregates. Team of Researchers at Golden nexus LLP develop the nanoparticles, such as nano-silica or nano-clays, to improve the adhesion between asphalt binder and aggregates. These nanoparticles are incorporated into the asphalt mixture to enhance bonding at the nanoscale, making it more resistant to moisture-induced damage.

By reducing the susceptibility of the asphalt mix to moisture damage, these agents help maintain the structural integrity and durability of road pavements.

Nanoparticles can modify the surface properties of asphalt aggregates, making them more hydrophobic (water-repellent) and less prone to stripping. This can result in improved resistance to moisture infiltration.

The use of nanotechnology in anti-stripping agents may lead to increased durability of asphalt pavements, reducing the need for frequent maintenance and repairs.

Some nanomaterial's can be used in lower quantities than traditional anti-stripping agents, which can reduce the environmental impact associated with asphalt production.

The potential benefits of using Nano based anti-stripping agents in asphalt mixes may include:

- 1. Improved Adhesion:** Nano materials can enhance the bond between asphalt and aggregates, reducing the susceptibility to moisture damage.
- 2. Increased Durability:** Nanoparticles may contribute to the overall durability and longevity of asphalt pavements.

3. Enhanced Mechanical Properties: Nano materials may improve the mechanical properties of asphalt mixes, such as stiffness and fatigue resistance.

4. Reduced Environmental Impact: Some nanomaterials can be engineered to be environmentally friendly and sustainable.

Technical Datasheet

Product Name : **GD -NSA-21**

Stock No. : **GD-2023-110**

Properties

Appearance : Liquid/Solid

Odour : Odourless

Specific gravity 27°C : 0.860-1.03

Pour point °C Maximum : 42

Flashpoint (COC) : 150

Water content %Vol. Maximum : 1

Stripping value at 40°C, 24 hours : No stripping

Boiling water test % min. coating : 95