P5

OUR WORLD OF SUSTAINABILITY: GREEN PRODUCTS FOR AGRO-APPLICATION

Chin Kam NGUI, Susan SUN, Rupak PAUL, Chin Chiat LEE AkzoNobel Surface Chemistry Pte. Ltd.

Sustainability is at the heart of everything we do at AkzoNobel. Throughout the world, AkzoNobel provides innovative and sustainable technologies for crop-protection and the enhancement of agrochemical products. We serve formulators with solutions that are environmentally safe, biodegradable and cost effective.

Eco Premium Solvent Development: Armid® DM 10 is non-aromatic dimethylamide solvent with low water solubility, serving as a modern solvent for Emulsifiable Concentrate (EC) and Emulsion Concentrate (EW) formulation of active ingredients requiring a moderate polarity solubilizer. Armid® FMPC is an optimized morpholine-carbonate blend, for Soluble Liquids (SL) formulation with low tendency for crystallization upon dilution in a tank of water before spraying. This product is conceptualized as a solvent for imidacloprid 200 g/l SL formulation. It is also soluble in many other solvents such as water, glycols, ethanol, xylene, vegetable and mineral oils, thus a good solvent to have in other SL formulation. These solvents are Eco Premium solvents as they are non-flammable, readily biodegradable, safe toxicological, ecotoxicological profiles and have good handling characteristics namely, low pour point and low viscosity in cold water. Armid® DM 10: N,N-Dimethyldecanamide, is TSCA, DSL, and REACH listed. FIFRA registration is under 40CFR 180.920. The ingredients in Armid® FMPC are listed on TSCA and DSL. The product contains only ingredients that have been subject to a pre-registration, according to EC Regulation No. 1907/2006 (REACH).

Eco Premium Adjuvant Development: Adsee® 766 is a proprietary blend of surfactants designed to match the key properties of nonylphenol ethoxylate with 9 or 10 ethylene oxide units (NP9 or NP10). The cloud point of Adsee® 766 is matched to that of NP9. Handling this product is much better than the nonylphenol ethoxylates in terms of lower pour point and viscosity. Solubility at 5 and 25 °C is the same, i.e., it is not affected at this temperature range unlike NP9. This implies that the product has potential application as a tank side adjuvant at low temperature. It is nonylphenol ethoxylate free and readily degradable. This is an Eco Premium adjuvant and it is registered under TSCA, FIFRA and DSL.

English Title: Our World of Sustainability: Green Products for Agro-Application

Speaker: Chin Kam NGUI

Company: Akzo Nobel Surface Chemistry Pte. Ltd.

Abstract: Sustainability has become an integral part of AkzoNobel. AkzoNobel defined sustainability in the delivery of Eco Premium solution to customers in six categories: toxicity, energy efficiency, use of natural resources / raw materials, emissions and waste, land use and risks. To qualify as an Eco Premium solution, it must be significantly better in one criterion and not worse in the other criteria. Agro-Application has been developing a series of green products with these criteria.