



CATI

Center for Advanced Technology and Innovation

Solid Polymer Compositions Disperse in Water and Eliminate Organic Solvents in Ag Chem Formulations

Description: Researchers at International Specialty Products, a global chemical company located in Wayne, NJ has developed a polymer complex of a pesticide or herbicide which, when added to water, forms an instant dispersion of the pesticide or herbicide into a stable emulsion, with nearly complete recovery of the pesticide or herbicide. Various liquid or low melting pesticide and herbicide formulations, previously formulated with organic solvents are combined with a polymer in solution and co-precipitated to form a polymer complex which captures the pesticide or herbicide yet exists as a solid at ambient conditions.

Patent Listing:

1. **US Patent No. 5,476,662**, Issued 12/19/95, "Pesticide or herbicide polymer complexes for forming aqueous dispersions"
2. **US Patent No. 5,679,366**, Issued 10/21/97, "Pesticide or herbicide polymer complexes for forming aqueous dispersions"

Market Potential: The precipitated polymer complex is an easily handled solid which captures the pesticide or herbicide into a stable emulsion, with approximately 100% availability, without the additional of other surfactants.

Benefits:

- Easily handled solid formulation system
- High availability when dispersed in water
- Accurate measurement of high activity compounds
- Low volatility, solid form limits exposure to actives

Applications:

- Agricultural Market for Producers of Herbicide and Pesticide Formulations
- Consumer Market for Producers of Lawn Care Products

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