

## PALADIN<sup>®</sup> – DIMETHYL DISULFIDE AS A REPLACEMENT SOIL FUMIGANT FOR METHYL BROMIDE

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Arkema has received registration from the US EPA for dimethyl disulfide (DMDS), a novel soil fumigant which will become available under the trade names Paladin<sup>®</sup> (shank application) and Paladin<sup>®</sup> EC (drip application).

Arkema is cooperating in the launch of this new soil fumigant with United Phosphorus (UP), who will distribute Paladin<sup>®</sup> in the United States and other selected countries. Paladin<sup>®</sup> has also been approved for use in Israel, and there are active programs to register Paladin<sup>®</sup> in Mexico, Turkey, South Africa and Morocco.

Paladin is a novel pre-plant soil fumigant for the treatment of nematodes, weeds and soil-borne plant pathogens. Arkema, through its exclusive distributor, UP, has evaluated the new fumigant alone and in co-application with chloropicrin for efficacy and marketable yield in direct comparison to methyl bromide. Arkema believes that Paladin will be an important substitute for Methyl Bromide in appropriate applications. Paladin<sup>®</sup> has been registered for pre-plant use for tomatoes, peppers, eggplants, cucurbit crops, strawberries, blueberries, field-grown ornamentals and forest nursery stock where plastic is used for cultivation.

DMDS is produced biogenically in wetlands and oceans, and plays a role in the global sulfur cycle. It is also produced by certain plants, including members of *Allium* and *Brassica*, where it has been postulated to play a natural defensive role in response to damage. Measurable levels of biogenic DMDS are found in a variety of crops and foods.

DMDS has a strong, objectionable odor, which can be detected at concentrations significantly below the US EPA's Level of Concern. DMDS is closely related to the compounds used to odorize natural gas and propane and its garlic-like odor can be mistaken for a gas leak. Safety and Product Stewardship are priorities in Arkema's and UP's launch of Paladin<sup>®</sup>. The use of specified VIF tarp is required with Paladin<sup>®</sup> application.

PALADIN IS A RESTRICTED USE PESTICIDE due to inhalation exposure to humans: it is for sale and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.