

PM 90

70060-3

3/17/98

1/9

M-96-018 KAOLIN

A Broad Spectrum Agricultural Repellent/Protectant for Controlling Damage to Agricultural Crops from Various Insects, Mites, Fungal and Bacterial Diseases.

ACTIVE INGREDIENT:

Kaolin.....98.8%

INERT INGREDIENTS:..... 1.2%

Total:..... 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT (FIRST AID)

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

Manufactured by:
ENGELHARD CORPORATION
101 Wood Avenue
Iselin, NJ 08830
Emergency phone number: 1-800-424-9300

Net Weight 50 lbs.

EPA Reg. No. 70060-
EPA Est. No. 70060-GA-1

ACCEPTED
3/17/98
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 70060-3

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. May cause irritation to the respiratory system. Avoid breathing dust or mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:
Long sleeved shirt, long pants, socks and shoes, and a dust/mist filtering respirator with MSHA/NIOSH approval number TC-21C.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

AGRICULTURAL USE REQUIREMENTS

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. The restricted-entry interval (REI) is 4 hours, do not allow worker entry into treated areas during the restricted-entry interval (REI). Personal protection equipment required for early entry workers are long-sleeved shirt, long pants, waterproof gloves and shoes plus socks.

I. GENERAL INFORMATION

M-96-018 Kaolin is a unique mineral-based product which is intended for agricultural uses. When M-96-018 Kaolin is applied to plants a dry hydrophobic particle film will develop. M-96-018 Kaolin will help reduce the damage to plants and crops caused by insects, mites, fungi and bacteria. Plant Response Precautions - If the spray droplets bead and do not adhere to crop foliage and/or fruit and a white film does not form, the plant may be naturally water repellent. This would preclude the use of M-96-018 Kaolin on that variety.

4/9

II. DIRECTIONS FOR USE

a. Spray Preparation:

To prepare M-96-018 Kaolin spray solution, the following mixing sequence must be followed; proportional reductions or increases may vary depending upon size of spray equipment:

1. Pour 4 gallons of methanol diluent (98% minimum purity) into a vessel capable of being agitated.
2. Slowly add 25 pounds of M-96-018 Kaolin into the methanol diluent while under agitation.
3. Mix until slurry is free from lumps; the M-96-018 Kaolin powder must all be wetted with methanol before further delusion with water.
4. Transfer the methanol/M-96-018 Kaolin slurry to a recirculating sprayer tank that has been filled with 100 gallons of water.
5. Mix by pumping for at least 5 minutes.
6. Continue gentle agitation until all of the material is sprayed from the tank. Vigorous agitation may cause foaming.

Optimum pest control requires M-96-018 Kaolin to be applied as a dilute application where it is applied to near-drip. Under normal temperature and humidity conditions, nozzles that produce a fine spray are recommended. Under very hot and dry conditions, nozzles that produce a coarser spray and larger volumes are recommended. Otherwise, the product may dry before it contacts the foliage which will result in poor particle film formation. The total spray volume and nozzle size is best determined by previous experience with other dilute applications. Spray is applied to thoroughly cover plant surfaces. The resulting dry hydrophobic particle film (HPF) will help control damage from crop pests.

Observe crop label instructions for specific directions regarding spray volume. Calibrate spray equipment to deliver the required gallonage. The flow rate of this product is similar to water. Use of 25 mesh slotted strainers in the spray system and behind each nozzle is recommended.

b. Compatibility:

M-96-018 Kaolin is not compatible with most pesticides. Consult with your Engelhard representative for recommendations related to compatibility with specific pesticides, fungicides, mineral fertilizers and related adjuvants such as wetting agents, anti-foamers or surfactants. It is not compatible with oils, kerosene, fuel oil, or aromatic solvents.

c. Application:

For optimal performance, applications must coat all portions of plant that are to be protected, including both sides of the leaves. For pests such as fireblight that are located on the growing

shoots of the plants, applications should ensure that these parts of the plant are coated. Applications can be made with any commercial sprayer that provides enough force to coat both sides of the leaves, the bark, and fruit.

For efficacy, the plant surface must turn to a uniform hazy white color after drying. Additional treatments may turn the plant surface a deeper white. This is normal and does not markedly impair photosynthesis, and is indicative of appropriate film formation.

Wash-off resistance and coverage: The film typically adheres to foliage well enough to withstand several light rains. Drying time required is about 15 minutes depending on weather conditions. Apply only to dry foliage. Do not apply to wet foliage or poor coverage and adhesion will result. When the foliage has lost its white appearance, reapplication is necessary.

Reapplication is normally required every 7-14 days. If rainfall is heavy, reapplication within one day is acceptable.

Overhead irrigation will wash off the film and reduced efficacy will result. Overhead irrigation is not preferred but if used should be timed just prior to the next application to prevent premature wash-off.

Chemigation and aerial application: Do not apply this product through sprinkler irrigation systems or by aerial application.

To clean the spray system after use, drain and flush with water and detergent.

Do not spray on ornamentals or crops where the visible white film are undesirable and cannot be washed off.

d. Insect, Mite, and Disease Control:

Application is required prior to insect and disease infestation for M-96-018 Kaolin to provide maximum protection. Protection is only achieved by forming a hydrophobic particle barrier prior to the beginning of insect, mite and disease life cycles. Where a dosage range is indicated, use lower rates on younger plants or trees.

e. Packing and Processing:

Washing of treated food crops is recommended; most residues wash off with brushing and forced water sprays; an approved surfactant may be used in the wash tank. A pre-harvest washing trial is recommended to determine if a surfactant is necessary to remove visible residue.

FIELD AND VEGETABLE CROPS

Apply sufficient spray volume to obtain thorough coverage. Do not deviate from the spray mixture of 25 lbs. of M-96-018 Kaolin to 4 gallons of methanol diluent (98% minimum purity).

Further dilute by adding the slurry to 100 gallons of water under agitation, unless otherwise specified for a particular application. Prepare small volumes by first preparing a slurry of 1.0 lb of product in 20.5 fluid oz. (605 ml) of methanol diluent (98% minimum purity). Further dilute by adding the slurry to 4 gallons of water while under agitation. Proportional batch reductions or increases can be made.

Note: Do not over agitate in any system as excessive foaming may result.

For crops where the produce is directly sprayed do not apply M-96-018 Kaolin within 10 days of harvest. **Washing is recommended; most residues wash off with brushing and forced water sprays; an approved surfactant may be used in the wash tank. A pre-harvest washing trial is recommended to determine if a surfactant is necessary.** For crops where the produce is not directly sprayed by M-96-018 Kaolin spray (e.g., potato, shelled beans, radishes), you can apply M-97-018 Kaolin up to the day of harvest.

CROP	INSECT or MITE, such as	POUNDS OF M-96-018 KAOLIN/ACRE
Beans (all)	Alfalfa looper Aphids Fall armyworm Flea beetle Mexican bean beetle European red mites Japanese beetle Leafhoppers Lygus bug Stink bug Tarnished plant bug Three cornered alfalfa hopper Thrips Two-spotted spider mite Velvetbean caterpillar	6.25 to 12.5
Collards Beet, Garden Beet, Sugar Horseradish Radishes Rutabagas Turnips	European red mites Flea beetle Harlequin bug Imported cabbage worm Leafhoppers Tarnished plant bug Two-spotted spider mite	6.25 to 12.5
Cotton	Cotton fleahopper European red mites Flea beetles Tarnished plant bug Thrips Two-spotted spider mite Whiteflies	10.0 to 50.0
Potato Tomato	European red mites Colorado Potato Beetle Flea beetles	6.25 to 25.0

Eggplant Pepper	Lace bugs Leaf hoppers Stink bugs Tarnished plant bug Tomato fruit worm Tomato pinworm Two-spotted spider mite	
--------------------	--	--

TREE FRUIT CROPS

Apply sufficient spray volume to obtain thorough coverage. Do not deviate from the spray mixture of 25 lbs. of M-96-018 Kaolin to 4 gallons of methanol diluent (98% minimum purity). Further dilute by adding the slurry to 100 gallons of water under agitation, unless otherwise specified for a particular application. Prepare small volumes by first preparing a slurry of 1.0 lb of product in 20.5 fluid oz. (605 ml) of methanol diluent (98% minimum purity). Further dilute by adding the slurry to 4 gallons of water while under agitation. Proportional batch reductions or increases can be made.

Note: Do not over agitate in any system as excessive foaming may result.

To simplify the cleaning of peaches, do not apply within 10 days of harvest. Do not apply within 3 days of harvest on other tree fruits. Washing is recommended; most residues wash off with brushing and forced water sprays; an approved surfactant may be used in the wash tank. A pre-harvest washing trial is recommended to determine if a surfactant is necessary.

CROP	INSECT, MITE or DISEASE, such as	POUNDS OF M-96-018 KAOLIN/ACRE	SPECIFIC DIRECTIONS
Citrus Fruits (lemons, oranges, limes)	Mites Thrips	25.0 to 175.0	
Pome Fruits (apple, pears, loquats, crabapples, oriental pears and quince)	Apple aphid Apple maggot Apple rust mite Apple scab Apple sucker California pear slug Codling moth European red mite Fireblight Japanese beetle June beetle Leaf hoppers Leaf miners Lygus bugs	25.0 to 100.0	For disease control, begin applying at green tip. Where codling moth pressure is high, supplementary control may be needed.

	Pearleaf blister mite Pear psylla Pear rust mite Pear scab Plum curculio Tarnished plant bug Thrips		
Stone Fruits (Such as apricots, cherries, nectarines, peaches, plums, prunes)	Codling moth Cucumber beetles European earwig Japanese beetle June beetle Leafminers Plum curculio Tarnished plant bug Thrips	25.0 to 100.0	Where codling moth pressure is high, supplementary control may be needed.

SMALL FRUIT CROPS

Apply sufficient spray volume to obtain thorough coverage. Do not deviate from the spray mixture of 25 lbs. of M-96-018 Kaolin to 4 gallons of methanol diluent (98% minimum purity). Further dilute by adding the slurry to 100 gallons of water under agitation, unless otherwise specified for a particular application. Prepare small volumes by first preparing a slurry of 1.0 lb of product in 20.5 fluid oz. (605 ml) of methanol diluent (98% minimum purity). Further dilute by adding the slurry to 4 gallons of water while under agitation. Proportional batch reductions or increases can be made.

Note: Do not over agitate in any system as excessive foaming may result.

Pre-harvest interval is 10 days. **Washing is recommended; most residues wash off with brushing and forced water sprays; an approved surfactant may be used in the wash tank. A pre-harvest washing trial is recommended to determine if a surfactant is necessary.**

CROP	INSECT, MITE, such as	POUNDS OF M-96-018 KAOLIN/ACRE
Blackberries Raspberries Dewberries (including boysenberries and loganberries)	Blackberry psyllid European raspberry aphid Japanese beetle Leafhoppers Thrips	12.5 to 37.5
Grapes	Grape leafhopper	12.5 to 37.5

9/9

	Japanese beetle June beetle Thrips	
--	--	--

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in a dry, sheltered location. In case of spill or leak, avoid breathing dust, clean up and dispose of wastes in compliance with applicable Federal, State, and local regulations.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, State, and local procedures.

CONTAINER DISPOSAL: Completely empty bag into application equipment. The dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

WARRANTY STATEMENT, DISCLAIMER

The manufacturer warrants that this product conforms to the chemical description on the label; that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and that the directions, warnings and other statements on this label are based upon reasonable experts' evaluations of reasonable tests of effectiveness, and upon reports of field experience. Tests have not been made under all conditions. THE MANUFACTURER NEITHER INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSSES OR DAMAGE WHICH MAY RESULT FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL, DIRECTIONS, WARNINGS OR CAUTIONS.

BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY [(FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES OR INJURIES RESULTING FROM THE USE)]OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. ((IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE)) OR HANDLING OF THIS PRODUCT.