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# PERIGEN™ INDUSTRIAL MOTHPROOFER

- \* INSECTICIDE FOR MANUFACTURING USE ONLY.
- \* FOR MANUFACTURING USE IN PRODUCING WOOL AND WOOLY POLAMIDE BLENDS.
- \* PERIGEN IS STABLE IN BOILING ACID AND NEUTRAL (BELOW pH 7.5) DYE BATHS FOR AT LEAST 7 HOURS.
- \* PERIGEN EXHIBITS VERY GOOD LEVELING PROPERTIES. IT CAN BE APPLIED AT A pH RANGE OF 2.5-6.0.
- \* THE MOTHPROOFING PROPERTIES OF PERIGEN ARE NOT GENERALLY ADVERSELY AFFECTED BY LEVELING AGENTS IN DYE BATHS.
- \* PERIGEN DOES NOT HAVE A RETARDING EFFECT OF THE DYESTUFF AFFINITY TO WOOL OR WOOL/NYLON BLENDS.
- \* A DURABLE MOTHPROOFING AGENT FOR WOOL AND OTHER PROTEINACEOUS FIBERS.
- \* PERIGEN INDUSTRIAL MOTHPROOFER IS AN INSECTICIDE FOR USE BY PROFESSIONAL OPERATORS FOR THE PROTECTION OF WOOL AND WOOL/POLYAMIDE BLENDS AGAINST WOOL PESTS.
- \* THE PRODUCT CAN BE APPLIED BY SEVERAL METHODS: DYE BATH, AFTER TREATMENT, BATCHWISE OR CONTINUOUS SCOURING OR WASHING (RAW OR FABRIC), YARN IN THE SPINNING LUBRICANT, SPECIALIZED CARPET TREATMENTS, SOFTENER BOWL OF KROY HERCOSETT, REDUCTION BLEACHING

## ACTIVE INGREDIENT:

+Permethrin .....	12.00%
++INERT INGREDIENTS: .....	88.00%
	100.00%

+(3-phenoxyphenyl) methyl (+/-) cis/trans 3-(2,2-dichloroethenyl) 2,2-dimethylcyclo-propanecarboxylate. Cis/trans ratio: max. 35% (+/-) cis and min. 65%(+/-) trans.

++ Contains Petroleum Distillate.

Perigen is a trademark of AgrEvo Environmental Health, Inc.

→ EPA Reg No  
KEEP OUT OF REACH OF CHILDREN

## CAUTION

### STATEMENT OF PRACTICAL TREATMENT

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

IF SWALLOWED: Contact a physician or Poison Control Center immediately. Do not induce vomiting unless under a physician's care. This product contains petroleum distillate. Vomiting may cause aspiration pneumonia.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air. Get medical attention.

See Reverse Side For Additional Precautions

NET CONTENTS:

## PRECAUTIONARY STATEMENTS

Hazards To Humans & Domestic Animals

### CAUTION

Harmful if inhaled. Causes eye irritation. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

### Environmental Hazards

This product is extremely toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment washwaters.

### Physical And Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

SEE TECHNICAL DATA SHEET - PERIGEN INDUSTRIAL MOTHPROOFER.

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

## STORAGE AND DISPOSAL

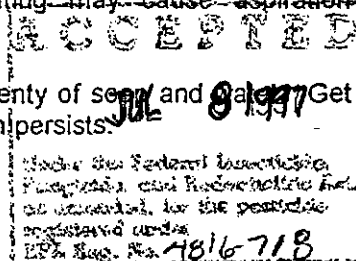
Do not contaminate water, food or feed by storage or disposal.

**Pesticide Storage and Spill Procedures:** Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

**Pesticide Disposal:** Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by and approved waste disposal facility.

**Container Disposal:** Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved State and local procedures.

**CONTAINER DISPOSAL FOR RETURNABLE CONTAINERS:** Replace the dry disconnect cap if applicable, and seal all openings which have been



opened during use. Return the empty container to a collection site designated by AgrEvo Environmental Health. If the container has been damaged and cannot be returned according to the recommendation procedures, contact AgrEvo Environmental Health Customer Service Center at 800-\_\_\_\_-\_\_\_\_.

**RETURNABLE/REFILLABLE SEALED CONTAINER:**  
Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return to point of purchase.

PERIGEN INDUSTRIAL MOTHPROOFER does not stain or color wool. PERIGEN prevents feeding and kills insect pests of wool. Permethrin has a high affinity for wool and does not bind preferentially to polyamide in wool/polyamide blends. For this reason there is no requirement for increased application rates of PERIGEN when treating wool/polyamide blend yarns.

PERIGEN is fast to washing, perspiration, abrasion, shampooing, and dry cleaning. It also provides adequate protection of wool from attack by larvae of:

-moths	the brown house moth	<u>Hofmannophila pseudospretella</u>
	the webbing clothes moth	<u>Tineola bisselliella</u>
	casebearing clothes moth	<u>Tinea translucens</u>
	casebearing clothes moth	<u>Tinea pellionella</u>
	casebearing clothes moth	<u>Tinea dubiella</u>
-fur beetle		<u>Anthrenus flavipes</u>
		<u>Anthrenus verbasci</u>
-carpet beetle		<u>Attagenus meatorum</u>

#### Continuous Scouring or Washing

The continuous application of PERIGEN is only economical if large quantities of wool are being processed because of the initial charge required in the treating bath. The mothproofing agent should be applied from the last bowl or washbox with no further rinsing. To ensure that PERIGEN is being applied uniformly, it is necessary that the diluted product be added continuously to keep the bath concentration fairly constant.

#### Yarn in the Spinning Lubricant

PERIGEN may be applied in spinning lubricant applied to yarn which is then subjected to steaming. The steaming process should be of at least 8-10 minutes duration at 105°C (221°F).

PERIGEN may be applied in spinning lubricant applied to yarn to be made up into carpet which will be foam backed. In this case the finished carpet will be subjected to the following foam backing sequence of at least 10 minutes duration: steam - precoat - dry - foam application - bake.

#### Specialized Carpet Applications

PERIGEN may be applied to carpets as a spray prior to backing application and as an addition to the print paste. Details are given under Methods of Application.

#### Kroy-Hercosett

PERIGEN may be applied from the final softener bowl of the backwashing line (95-194°F or 35-40°C) of the

Kroy Hercosett treatment to proof blankets, curtains and car seat covers.

#### METHOD OF APPLICATION

##### Dyebath

1. Dilute the product with water and add to the dyebath prior to adding the acid.

2. Then add the other auxiliaries, acid and dyes. Run in the usual manner.

##### Application for stock, yard, or piece dyeing and yarn setting

The calculated quantity of PERIGEN to give the % owg for the level of protection required is added to the dyebath or setting bath after diluting with water at a rate of 1 part PERIGEN to 3 parts water.

The calculated quantity of PERIGEN should preferably be added to the cool bath before immersing the wool or yarn.

PERIGEN may be applied in the dyebath during loose stock, yarn and piece dyeing.

When fabrics or yarns are to undergo further finishing after dyeing (e.g. tape scouring of stock-dyed carpet yarns, piece scouring stock or yarn dyed upholstery fabrics) PERIGEN should be applied during the finishing process and not during dyeing. If application during dyeing is unavoidable then application rates should be increased by 25%.

PERIGEN may also be applied during the dyeing of yarn for carpets which will be chemically washed (to provide a high-lustre finish). However, because the chemical washing procedure removes a proportion of the permethrin applied, higher initial application rates must be adopted.

PERIGEN may also be applied to as little as 20% of yarn intended for carpet manufacture if treatment levels are raised and the treatment yarn is intimately mixed with untreated yarn. This is particularly suitable for dry-spinning operations in which the dyed portion of a berber blend may be overtreated or even blank dyed for the purposes of applying PERIGEN. Fastness achieved in the dyebath is greater than by lubricant application allowing a technically superior result at economic cost.

##### Application for blankets, curtains and car seat covers

PERIGEN is applied in the dyebath after diluting at a rate of 1 part PERIGEN to 3 parts water. The dyebath should be acidified by the addition of 3% on weight of wool (oww) formic acid 90%. The material is allowed to wet thoroughly at 68°F (20°C) and the diluted PERIGEN then added. The temperature of the dyebath is then raised to the boiling point and held at that temperature for 30 minutes.

### Aftertreating Bath

1. Dilute PERIGEN in water and add to the treatment bath containing the goods at 115°F (45°C).
2. Then add X% (o.w.g.) acetic acid, prediluted with water (pH 4-5).
3. Run 30 minutes.

The treated fabric does not require a subsequent rinse. The addition of cold water to the treating bath for cooling down does not affect the mothproofing effect.

### Carpets

PERIGEN may be applied in the final acidification step of chemical washing. The calculated quantity of PERIGEN and acetic acid (1% owg) are mixed with sufficient water to give a liquid to carpet ratio of 3 parts liquid to 1 part carpet by weight. The liquid is heated to 122°F (50°C) and sprayed onto the carpet. Brush the face of the pile (and occasionally the back of the carpet) for 5 minutes. Allow to stand for 10 minutes and repeat the brushing procedure for 5 minutes. Remove excess water using squeegees and allow to dry.

PERIGEN may also be used as an after-treatment following chemical washing. The carpet should be immersed in water at 20°C containing the calculated amount of PERIGEN to give the % owg for the level of protection required (i.e. 0.3 or 0.45% PERIGEN owg) using liquid to carpet ratio of 10 parts liquid to 1 part carpet by weight. The liquor should be forced into the carpet by applying frequent pressure to the carpet for a period of approximately 10 minutes. Acetic acid should then be added to the bath at 1% owg and further pressure applied to the carpet for a period of 20 minutes, turning the carpet occasionally when possible. Remove carpet from treating vessel and remove excess water using squeegees. Allow to dry.

When carbonized goods are to be treated, they have to be neutralized with ammonia to pH 6-7 prior to the PERIGEN application. Residual amounts of the carbonizing acid can cause too fast striking of the PERIGEN.

### Continuous Scouring or Washing

1. The last bowl is set with - 0.5 g/l (0.07 oz/gal) PERIGEN at a temperature of 115°-120°F (45°-50°C).
2. Subsequent additions are based on the hourly output of wool - 0.5% on the weight of raw wool. The PERIGEN is diluted with water, and this solution is added continuously to the bath during the entire treatment or, if this is not possible, in portions.
3. Example:  
A 2,000-pound lot of wool is to be washed and treated with PERIGEN. The hourly output of the continuous

washer is 440 pounds. The capacity of the last bowl in the washer is 528 gallons -

Initial Charge: 0.5 g/l = 2.25 pounds  
PERIGEN/528 gallons

Subsequent Adds: 0.5% of 2,000 pounds = 10 pounds  
PERIGEN

These adds would be approximately 2 pounds/hour. Dilute this amount to 12 gallons with water and add 1 gallon every 5 minutes unless a continuous feed system is available. The degree of dilution can be varied somewhat, but the higher the dilution, the better for uniformity in adding to the treatment bath.

PERIGEN may also be applied continuous scouring by metered addition. In this process before any yarn is treated, the final bowl should be charged at a rate of 0.3 ml PERIGEN, or 1.2 ml of diluted PERIGEN per liter (4.5 ml diluted per gallon) of liquor volume and thoroughly stirred. The metering device should be filled with diluted PERIGEN and stirred every hour. During the passage of yarn through the bowl the diluted PERIGEN should be metered into the bowl at a rate of 83.5 oz. or 167.3 oz. per 1000 lb. of yarn (equivalent to 0.16 or 0.32% owg) depending on the level of protection required.

### Yarn in the Spinning Lubricant

Select a spinning lubricant compatible with PERIGEN.

The quantity of spinning lubricant (usually mixed with water) which is retained by a given quantity of wool during yarn spinning should be calculated.

Select the level of protection required (i.e. 0.16 or 32% owg for lubricant/steaming treatments, and 0.38% or 0.82% owg for lubricant treatment followed by foam backing) and then dilute the PERIGEN in the total volume of lubricant so that the volume retained by each batch of yarn after spinning will contain sufficient PERIGEN to give the required % owg.

To optimize the uptake of PERIGEN add a small quantity of acid (e.g. acetic acid) to the spinning solution to obtain a final pH of 5-6.

Mix the product in the tank to obtain and keep a homogenous product. If possible, warm the spraying solution to 122°F (50°C). Treatment of the yarn should then follow normal lubricant application practice.

### Specialist Carpet Applications

PERIGEN may be applied as a spray prior to backing application. This application method may leave a relatively high deposit of active ingredient on the surface of the carpet, the finish of which may therefore be detrimentally affected. Spraying should be carried out as the carpet is being conveyed to the packing process. Spray nozzles should be set up to give complete coverage across the width of carpet. Nozzles should be selected to provide a coarse spray. The

volume of water picked up by a given weight of carpet should first be determined. PERIGEN should then be diluted with water as appropriate to achieve desired application rates at this predetermined pick-up rate. Addition of a small quantity .01% w/v (1 ml/liter) of 80% acetic acid to the emulsion may aid fastness. During the subsequent backing procedure the carpet should pass through the following sequences: steam - precoat - dry - foam back - bake.

PERIGEN may be applied by addition to the print paste. This application method may leave a deposit of active ingredient on the surface of the carpet, the finish of which may therefore be detrimentally affected. It should only be used for all-over print patterns (or if a blank paste containing PERIGEN is used in uncolored areas) and if printing is followed by steaming. Penetration of print paste to the base of the tufts should be ensured.

#### Oxidative/Reductive Bleaching

PERIGEN may be applied during a two part oxidative/reductive bleaching process by addition to the reductive bleaching liquor (eg. stabilized hydrosulphite solution).

#### Horse Hair and Bristles

Treat the loose material for 1 hour at 120° - 130°F (50° - 55°C) with 0.3-0.5% (owg) PERIGEN; pH 4.0-4.5 (acetic acid).

If the loose material is to be dyed, the PERIGEN can be added to the dyebath.

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