



ACCEPTED
SPECIMEN LABEL
 AUG 23 1973
 UNLESS OTHERWISE SPECIFIED, THIS LABEL IS FOR THE EXCLUSIVE USE OF THE PRODUCT IDENTIFIED HEREIN AND IS NOT TO BE REPRODUCED OR USED FOR ANY OTHER PRODUCT WITHOUT THE WRITTEN PERMISSION OF THE DOW CHEMICAL COMPANY.

DOWICIDE^{*} A

ANTIMICROBIAL Ground Form

FOR USE IN MANUFACTURING PROCESSES ONLY

Active Ingredient:
 Sodium o-Phenylphenate • 4H₂O 97%
 Inert Ingredients 3%

E.P.A. Registration No. 464-78-AA

If exposed to air this material may give a cloudy solution in water. Such cloudiness may be minimized by adding sufficient caustic.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

NOTE: Refer to Directions in Technical Bulletin for DOWICIDE A ANTIMICROBIAL Before Handling or Using.

WARNING

**INJURIOUS TO EYES • IRRITATING DUST
 HARMFUL IF SWALLOWED**

**Do Not Get in Eyes • Avoid Skin Contact
 Avoid Breathing Dust**

FIRST AID: In case of eye contact, flush eyes with plenty of water for at least 15 minutes. Call a physician. In case of skin contact, wash skin with soap and plenty of water. Remove and wash contaminated clothing and shoes before reuse. If irritation develops, call a physician. Do not reuse empty drum. Return to drum conditioner or destroy by perforating or crushing. Bury with wastes or burn.

11177-001-G KEEP PACKAGE TIGHTLY CLOSED WHEN NOT IN USE C1072

260 LB./ 117.93 KILOS

THE DOW CHEMICAL COMPANY

AND SUBSIDIARIES

MIDLAND, MICHIGAN 48640, USA ZURICH, SWITZERLAND HONG KONG, BCC
 CORAL GABLES, FLORIDA 33134, USA SARNIA, ONTARIO, CANADA

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464-78

08/23/1973

1/7



SPECIMEN LABEL

DOWICIDE^{*} A

ANTIMICROBIAL Flake Form

FOR USE IN MANUFACTURING PROCESSES ONLY

Active Ingredient:	
Sodium o-Phenylphenate • 4H ₂ O	97%
Inert Ingredients	3%

E.P.A. Registration No. 464-78-AA

If exposed to air this material may give a cloudy solution in water. Such cloudiness may be minimized by adding sufficient caustic.

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NOTE: Refer to Directions in Technical Bulletin for DOWICIDE A ANTIMICROBIAL Before Handling or Using.

WARNING

**INJURIOUS TO EYES • IRRITATING DUST
HARMFUL IF SWALLOWED**

**Do Not Get in Eyes • Avoid Skin Contact
Avoid Breathing Dust**

FIRST AID: In case of eye contact, flush eyes with plenty of water for at least 15 minutes. Call a physician. In case of skin contact, wash skin with soap and plenty of water. Remove and wash contaminated clothing and shoes before reuse. If irritation develops, call a physician. Do not reuse empty drum. Return to drum conditioner or destroy by perforating or crushing. Bury with wastes or burn.

11177-001-6

KEEP PACKAGE TIGHTLY CLOSED WHEN NOT IN USE

C1072

260 LB. / 117.93 KILOS

THE DOW CHEMICAL COMPANY

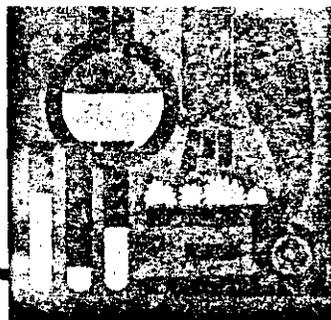
AND SUBSIDIARIES

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2/7

ANTIMICROBIAL AGENTS



SECTION I-9 ^{3/7}
DOWICIDE A
Antimicrobial

DOWICIDE* A ANTIMICROBIAL

DOWICIDE A Antimicrobial is Dow's designation for the sodium salt of o-phenylphenol.

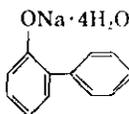
Adhesive manufacturers incorporate this antimicrobial into adhesives based on starch, protein, natural and synthetic gums, and natural latexes to protect them against attack by bacteria and mold during manufacture and storage, and throughout their service life. Agriculturally, aqueous solutions or wax emulsion formulations of DOWICIDE A are used for the post-harvest preservation of fruits and vegetables such as apples, bananas, cantaloups, carrots, cherries, citrus fruits, cucumbers, nectarines, peaches, pears, peppers, pineapples, plums, sweet potatoes, and tomatoes.

The leather industry utilizes DOWICIDE A in soaking liquors to prevent the slippage of hair or furs and sheepskins; in the paste used in hide-parting operations; and in sizing, finishing, and dressing materials. Metal workers who prepare their own emulsion-cutting fluids employ this antimicrobial alone or in a 50-50 mixture with DOWICIDE B Antimicrobial to protect the finished fluid against bacterial breakdown. Mixtures of DOWICIDE A and DOWICIDE G antimicrobials, or DOWICIDE A alone, are used by the paint industry for the preservation of decomposable raw materials or protein-base latex paints. Pulp and paper producers treat processing materials with DOWICIDE A, and textile producers utilize it to protect processing materials as well as finished yarns and cloth against the ravages of microorganisms.* Bulletins on the use of DOW antimicrobials in many of these industries are available on request.

Additionally, DOWICIDE A is used to control mold growth on construction materials and to preserve many products such as: automotive polishes, ceramic glazes and clay slips, foam-type fire-extinguisher solutions, hair shampoos, laundry starch, plastic gaskets, polishing compounds, polyvinyl alcohol, proteinaceous colloidal graphite mixtures, and floor wax emulsions.

(These are laboratory or literature data typical of the product and are not to be considered as, or confused with, specifications)

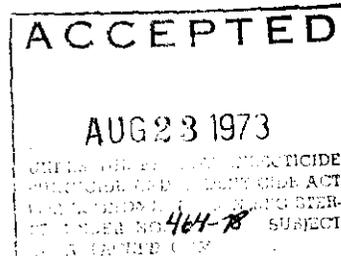
Structure



*Trademark of The Dow Chemical Company.

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NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. Freedom from patents of Dow or others is not to be inferred. Inasmuch as any assistance furnished by Dow with reference to the safe use and disposal of its products is provided without charge, Dow assumes no obligation or liability therefor, except to the extent that any such assistance shall be given in good faith.



THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN 48640

PHYSICAL PROPERTIES — continued

Formula.....	$C_6H_4(C_6H_5)O Na \cdot 4H_2O$	DOWANOL PM glycol ether.....	230
Molecular weight.....	264.3	DOWANOL TPM glycol ether.....	50
Specific gravity, 25/25° C	1.3	Ethanol (95%, F30).....	372
pH of saturated water solution, 25° C	12.0-13.5	Methanol	468
Bulk density, lb./ft ³	38-43	Ethylene glycol	>300
Solubility, approx g/100 g solvent at 25° C		Propylene glycol.....	>200
Acetone.....	330	Polyglycol P400.....	<1.0
DOWANOL* EM glycol ether.....	360	Water	
		25° C	120

SALES SPECIFICATIONS

Description White flakes and fines or powder; white ground flake or powder (ground grade)

Active ingredient:

Sodium-o-phenylphenate tetrahydrate 97%

Inert Ingredients..... 3%

Methods of analyses for these items may be obtained from Dow Chemical U.S.A., Designed Products Department, 2040 Dow Center, Midland, Michigan 48640.

E.P.A. Registration No. 464-78.

DOWICIDE A Antimicrobial is listed in the "EPA Summary of Registered Pesticide Chemical Uses" for post-harvest application to a variety of raw agricultural products. It can also be found in the "List of Chemical Compounds Authorized for Use Under USDA Poultry, Meat, Rabbit and Egg Products Inspection Programs" as a sanitizer and sanitizing cleaner.

DOWICIDE A meets the requirements of the Food Additive Regulations administered by the Food and Drug Administration as follows:

CFR 120.129 — o-Phenylphenol and Its Sodium Salt; Tolerances for Residues. For post-harvest application to a variety of raw agricultural products.

CFR 121.2514 — Resinous and Polymeric Coatings. Par. (b) (3) (xxxi), Can end cements.

CFR 121.2520 — Adhesives.

CFR 121.2526 — Components of Paper and Paperboard in Contact with Aqueous and Fatty Foods.

CFR 121.2534 — Animal Glue.

CFR 121.2548 — Zinc-Silicon Dioxide Matrix Coatings.

CFR 121.2550 — Closures with Sealing Gaskets for Food Containers.

CFR 121.2571 — Components of Paper and Paperboard in Contact with Dry Foods.

PACKAGES

DOWICIDE A is sold in fiber drums having a net weight of 100 lb.

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ANTIFUNGAL EFFICIENCIES

TEST ORGANISM	% DOWICIDE A for Inhibition
<i>Rhizopus nigricans</i>	0.023 -0.03
<i>Rhizoctonia solani</i>	0.0016-0.003
<i>Chaetomium globosum</i>	0.004 -0.008
<i>Hormiscus gelatinosum</i>	0.008 -0.016
<i>Aspergillus</i> No. 29.....	0.004 -0.008
<i>Polyporus tulipiferae</i> (F.P.L. No. 517).....	0.008 -0.016
<i>Aspergillus flavus</i>	0.008 -0.016
<i>Lenzites trabea</i>	0.004 -0.008
<i>Ceratostomella pilifera</i>	0.008 -0.016
<i>Trichophyton interdigitale</i>	0.003 -0.0054
<i>Trichophyton rosaceum</i>	0.0054-0.008

APPLICATIONS

Product or Material Protected	Reason for Treatment	Suggested Concentration*	How to Apply
Adhesives	To protect adhesives based on starch, protein, natural and synthetic gums, and natural rubber latex from deterioration during manufacture, storage and service life.	0.05-1.0% by wt of DOWICIDE A or a 50-50 mixture of DOWICIDE A and DOWICIDE G.	Add as concentrated aqueous solution.
Agricultural Products	For post-harvest preservation of fruits and vegetables.	0.05-3.09% by wt in water or wax emulsion formulation.	Dip, flood or spray fruit or vegetable with water or emulsion containing antimicrobial.
Ceramic Glazes and Clay Slips	To prevent bacterial decomposition.	0.05-0.19% by wt of formulation.	Add to formulation ingredients when they are charged into mill.
Chemical Toilets	To control odors in chemical toilets on buses, trains and airplanes.	1.0-1.5 oz per quart of water	Dissolve antimicrobial in water.
Construction Materials	To control mold growth on inert surfaces such as asbestos shingles, tile roofs, brick walls, and concrete blocks.	1.0% by wt. in water.	Rinse previously cleaned surface with solution of antimicrobial.
Feathers	To prevent deterioration of stored feathers.	50-50 mixture of DOWICIDE A and DOWICIDE G at 1.0% by wt. of dry feathers.	Spray feathers with concentrated aqueous solution of antimicrobials.
Fire Extinguisher Solutions	To preserve foam-type solutions.	0.25-0.5% by wt. of solution.	Add antimicrobial to solution.

* Refers to concentrations of DOWICIDE A, or to mixtures of DOWICIDE A and other Dow antimicrobials, as noted.

APPLICATIONS—continued

Product or Material Protected	Reason for Treatment	Suggested Concentration *	How to Apply
Floor Wax Emulsions	For shelf preservation.	0.1-0.5% by wt. of emulsion.	Incorporate in water phase of emulsion.
Graphite	To preserve protein colloidal graphite formulations.	50-50 mixture of DOWICIDE A and DOWICIDE G at 1.0% by wt. of graphite.	Add as concentrated aqueous solution.
Ink	For shelf preservation of dextrin-base watercolor printing inks.	0.5% by wt. of formulation.	Add as concentrated aqueous solution.
Laundry Starch	To preserve liquid starch during shelf life and after container is opened.	0.2% by wt. of formulation.	Add as concentrated aqueous solution.
Leather	To prevent slippage of hair or furs in soaking liquors; to prevent deterioration of treating and finishing formulations.	One part per 15 parts water for soaking liquors. 0.05-1.0% by wt. for pastes, dressings and finishes.	Add as concentrated aqueous solution.
Metal-Cutting Fluids	To prevent breakdown of oils, emulsifying agents, and other components.	0.1 to 1.0% by wt. of DOWICIDE A or a 50-50 mixture of DOWICIDE A and DOWICIDE B	Add as concentrated aqueous solution.
Paint	For storage preservation of decomposable raw material solutions or dispersions and shelf preservation of protein-base latex paints.	Minimum of 0.6% by wt. of DOWICIDE A or a 50-50 mixture of DOWICIDE A and DOWICIDE G	Add as concentrated aqueous solution.
Polyvinyl Alcohol	To preserve solutions of the alcohol.	0.6-0.8% by wt. of solution.	Add antimicrobial to solution.
Pulp and Paper	To preserve coatings, sizings, and printing colors based on starch, animal and vegetable protein, and latex.	0.1-1.0% by wt. of material preserved.	Add as concentrated aqueous solution.
Textiles	To preserve processing materials and finished yarns and cloth during storage.	0.1-0.75% by wt. of material treated.	Add as concentrated aqueous solution.

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HEALTH HAZARDS, PRECAUTIONS FOR SAFE HANDLING, FIRST AID MEASURES

The following statements are necessarily general in nature since the circumstances associated with the customer's use of the product are unknown and beyond Dow's control. Suggestions regarding the hazards likely to be encountered in specific operations will be made upon request whenever possible. Address inquiries to Dow Chemical U.S.A., Designed Products Department, 2040 Dow Center, Midland, Michigan 48640.

Health Hazards

Direct contact of DOWICIDE A with the eyes is capable of producing irritation and corneal damage which might persist for a week or two. A single short exposure may cause considerable irritation to the skin and single prolonged or frequently repeated exposures may cause a burn. Dust is irritating to the throat and nose.

Precautions for Safe Handling

Chemical workers' goggles or their equivalent should be worn when DOWICIDE A Antimicrobial or its solutions are handled. When the likelihood of appreciable exposure to dust or strong solutions cannot be eliminated by mechanical or other means, measures should be taken to prevent inhalation and skin contact. Workers should wear underwear with full-length arms and legs, overalls or outer garments covering the entire body, cap, and cloth gloves. Impervious sleeves with elastic bands at each end, to fit over long-gauntlet gloves, may be used for protecting the arms and wrists. Protection against dust will require a dust respirator bearing the label of the U. S. Bureau of Mines for use with toxic dusts.

Clean clothing should be worn each workday. Clothing and shoes which become grossly contaminated should be removed immediately and not reused until they have been thoroughly cleaned.

First Aid Measures

Eye Contact—Contaminated eyes should be flushed promptly and thoroughly with copious amounts of water for at least 15 minutes. Medical attention should be obtained.

Skin Contact—Contaminated clothing and shoes should be removed and not reused until thoroughly cleaned. Contaminated skin should be washed with soap and plenty of water. Any irritation which develops should receive medical attention.

Inhalation—Persons experiencing any ill effects from breathing the dust of this material should be removed to fresh air. Medical attention should be obtained.

FURTHER INFORMATION

Further information concerning DOWICIDE A Antimicrobial can be obtained by writing Dow Chemical U.S.A., Designed Products Department, 2040 Dow Center, Midland, Michigan 48640 or your Dow sales representative.

CUSTOMER NOTICE

DOW encourages its customers to review their applications of DOW products from the standpoint of human health and environmental quality. To help ensure that DOW products are not used in ways for which they are not intended or tested. DOW personnel are willing to assist customers in dealing with ecological and safety considerations. Your DOW salesman can arrange proper contacts.