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US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (TS-767) WASHINGTON, DC 20460	EPA REGISTRATION NO. 34292-5	DATE OF ISSUANCE AUG 23 1991
	TERM OF ISSUANCE	
	NAME OF PESTICIDE PRODUCT Dow Corning 5700 Antimicrobial Agent for Manufacturing Use Only	

NOTICE OF PESTICIDE: ☒ REGISTRATION
☐ REREGISTRATION
(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Dow Corning Corporation
2200 W. Salzburg Road
Midland, MI 48686-0994

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with this section 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product under this section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment:
 - a. Add the phrase "EPA Registration No. 34292-5".
 - b. Based on the flash point of this product, the fire hazard statement must read: "Flammable. Keep away from heat and open flame".
 - c. In the Storage and Disposal section, the storage instructions must read "Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If this wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the hazardous Waste representative at the nearest EPA regional Office for guidance.

☒ ATTACHMENT IS APPLICABLE

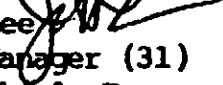
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SIGNATURE OF APPROVING OFFICIAL	DATE
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- d. On the front panel, change "Causes severe burns to eyes" to read "Causes eye damage".
 - e. In the precautionary statements, change "Burns eyes. Causes severe eye damage and cause skin irritation" to read "Corrosive. Causes eye damage and skin irritation".
 - f. In the statement of practical statement section, under "If Swallowed" change "Induce vomiting. Have patient lie down and keep warm" to read "Drink large quantity of water. Have patient lie down and keep warm".
 - g. On the front panel and Information Sheet, change the statement: "A Manufacturing Use Pesticide For Reformulation Antimicrobial Laundry Additive ..." to read "A Manufacturing Use Pesticide For Formulating Antimicrobial Biocide Use in Laundry Additive..."
 - h. Delete the phrase "General Classification".
 - i. Place the statement "It is a violation of Federal..." directly below the title "Directions For Use"
3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

John H. Lee 
Product Manager (31)
Antimicrobials Programs Branch
Registration Division (TS-767C)

Enclosure

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DOW CORNING 5700

Antimicrobial Agent
For Manufacturing Use Only

A SILICONE QUATERNARY AMMONIUM SALT

EPA Reg. No. 34292

ACTIVE INGREDIENT: 3-(trimethoxysilyl) propyldimethyloctadecyl ammonium chloride

INERT INGREDIENTS:

EPA Est. 34292 MJ-01

100%

KEEP OUT OF REACH OF CHILDREN

CONTAINS METHANOL

DANGER! POISONOUS. CAUSES SEVERE BURNS TO EYES •
METHANOL MAY CAUSE BLINDNESS • HARMFUL OR FATAL IF
SWALLOWED • VAPOR HARMFUL • AVOID BREATHING
SPRAY MIST OR VAPORS • AVOID CONTACT WITH SKIN •
FLAMMABLE

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Induce vomiting, have patient lie down and keep warm. Cover eyes to exclude light, call a physician and/or poison control center. IF INHALED: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. IF ON SKIN: Flush with copious amounts of water for at least 15 minutes. IF IN EYES: Flush with copious amounts of water for at least 15 minutes and get immediate medical attention. SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS (& DOMESTIC ANIMALS)

DANGER! BURNS EYES. CAUSES SEVERE EYE DAMAGE AND MAY CAUSE SKIN IRRITATION. Keep out of reach of children. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Use with adequate ventilation. Vapor harmful. Avoid breathing of vapor. Harmful or fatal if swallowed. Avoid contamination of food. Methanol may cause blindness.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Do not discharge into lakes, streams, ponds, or other waters unless in accordance with NPDES permit. For guidance contact your regional office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Flammable. Keep away from heat and open flame.

DIRECTIONS FOR USE

FOR INDUSTRIAL USE ONLY, AS A FINAL BACTERIOSTATIC, FUNGISTATIC, PRESERVATIVE FINISH IN THE PRESENCE OF MOISTURE.

DOW CORNING 5700® Antimicrobial Agent is to be used as directed in Dow Corning's Technical Bulletins.

GENERAL CLASSIFICATION: It is a violation of Federal law to use this product in a manner inconsistent with its label.

This product is to be used in the exclusive SYLGARD® Antimicrobial Treatment.



A MANUFACTURING USE PESTICIDE FOR REFORMULATING ADDITIVES; CARPET TREATMENT; UPHOLSTERY AND TREATMENTS AND HOUSEHOLD CLEANERS; for disinfection.

DOW CORNING

ACCEPTED
with COMMENTS
in EPA Letter Dated:

AUG 23 1991

Under the Federal Insecticide,
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Do not reuse containers. Do not fill or weld containers. Transport in equivalent empty containers, then offer for recycling or reconditioning, or purchase and dispose of in accordance with applicable state and local procedures approved by state and local authorities.

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



A diamond-shaped hazard label with a black border. Inside the diamond, at the top, is a stylized flame icon. Below the flame, the words "FLAMMABLE LIQUID" are printed in a bold, sans-serif, all-caps font.

FLAMMABLE LIQUID

A MANUFACTURING USE PESTICIDE FOR REFORMULATION OF ANTIMICROBIAL LAUNDRY ADDITIVES; CARPET TREATMENT; UPHOLSTERY AND DRAPERY TREATMENT; HOUSEHOLD TREATMENTS AND HOUSEHOLD CLEANERS; for disinfection and sanitization

All formulations will require EPA registration before they can be lawfully marketed. Formulators are responsible for satisfying registration requirements.

Products containing Dow Corning® 5700 Antimicrobial Agent® (bacteriostatic, fungistatic, algistatic) will provide the following benefits to treated fabrics and surfaces.

BACTERIOSTATIC AND FUNGISTATIC ACTIVITY ON TREATED SURFACES

Surfaces treated with products containing Dow Corning® 5700 Antimicrobial Agent are preserved by the bacteriostatic and fungistatic action imparted to surfaces. Microbial contamination of surfaces may result in odor problems, discoloration, and deterioration. Formulations containing Dow Corning® 5700 Antimicrobial Agent provides residual inhibition of microorganisms to aid in the control of odor problems, discoloration, and deterioration.

Dow Corning® 5700 Antimicrobial Agent forms a coating on a variety of surfaces. Antimicrobial action is exhibited on contact in the presence of moisture.

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For Protection of Textiles and hard surfaces EPA Reg. No. 34292-2 EPA Est. No. 34292-MI-01 Type...Brand of Silicone Quaternary Amine in Methanol

Typical Benefits...Broad spectrum bacteriostatic, fungistatic, algistatic activity on surfaces, durable attachment to a wide variety diluted in water.

Primary Use for Liquid Formulations Containing Dow Corning® 5700 Antimicrobial Agent

...Provide preservation for many types of fibers, fabrics and threads and a wide variety of surfaces, compatible, efficient, easily diluted in water.

Use as a laundry additive, carpet treatment, upholstery and drapery treatment, household cleaner and treatment. (1) for freshness and to help combat deterioration caused by fungi and bacteria; (2) to inhibit the growth of bacteria and mildew on the treated article; (3) to provide a durable residual, antimicrobial treatment; (4) to provide hygienic freshness; (5) to provide a treatment that is not destroyed by repeated cleaning; (6) to resist the development of bacterial and fungal odors; (7) to retain freshness by resisting the growth of odor causing bacteria and mildew (fungus); (8) to provide a chemical treatment enabling fabrics to resist odors; (9) to provide a unique chemical treatment that resists mildew and bacteria growth plus being odor resistant.

Refer to Product Bulletin for complete information on Formulation of End-Use Liquid Products with Dow Corning® 5700 Antimicrobial Agent, and other useful information.

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The information and data contained herein are based on information which is reliable. You should independently conclude satisfactory performance before commercialization. Suggestions of uses should not be construed as recommendations to infringe any particular patent.

DOW CORNING CORPORATION, MIDLAND, MICHIGAN 48640 TELEPHONE 517 496-4000

Information about Antimicrobial Agents

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DOW CORNING® 5700 Antimicrobial Agent can be used in the exclusive SYLGARD® Antimicrobial Treatment and the BIOSIL™ Antimicrobial Treatment.

DESCRIPTION

DOW CORNING 5700® antimicrobial agent is Dow Corning's designation for 3 (trimethoxysilyl) propyloctadecyl-dimethyl ammonium chloride diluted to 42% active ingredients by weight with methanol. Alkoxysilanes of this nature have been shown to form durable bonded coatings to a number of materials (see references).

DOW CORNING 5700 antimicrobial agent offers users the following features:

- Good durability - DOW CORNING 5700 antimicrobial agent imparts durable, broad spectrum, biostatic activity to the surface of a wide variety of substrates. It is leach-resistant and nonmigrating, and is not consumed by microorganisms.
- Broad spectrum activity - Effective against gram positive and negative bacteria, fungi, algae and yeasts.
- Increased efficiency - Through proper application, curable bacteriostatic, fungistatic and algistatic surfaces can be attained with a minimum amount of DOW CORNING 5700 antimicrobial agent.

HOW TO USE

DOW CORNING 5700 antimicrobial agent can be incorporated directly into organic- and inorganic-based formulations.

DOW CORNING 5700 antimicrobial agent can also be applied to organic or inorganic surfaces as a dilute aqueous solution to give 0.1 to 1.0 percent by weight of active ingredients. Aqueous solutions can be prepared by simply adding the antimicrobial agent to water with stirring. CAUTION: Poor agitation when adding this silane to water can result in locally high concentrations, which may form gel particles.

It also can be applied to organic and inorganic substrates in an appropriate solvent such as water, alcohols, ketones, esters, hydrocarbons and chlorinated hydrocarbons. These

DOW CORNING® 5700 ANTIMICROBIAL AGENT

U.S. Environmental Protection Agency Number
EPA Est. 34292-MI-01

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Type Silicone quaternary ammonium salt
Physical Form Low viscosity liquid
Special Properties Surface bondability
Primary Use As a durable antimicrobial agent active against a wide variety of bacteria, fungi, algae and yeasts

substrates can be treated by brushing, dipping, padding, soaking, spraying, logging or by using foam finishing techniques.

After applying the antimicrobial agent, the substrate can then be dried at temperatures from ambient to a maximum of 320 F (160 C) to effect complete condensation of silanol groups and to remove water and/or traces of methanol from hydrolysis. Optimum application and drying

conditions such as time and temperature should be determined for each application before use in a commercial process.

EPA REGISTRATION REQUIREMENTS

The applications for which this product is used require approval by the Environmental Protection Agency on an end-use basis and in regard to claims made thereof.

TYPICAL PROPERTIES

These values are not intended for use in preparing specifications.

	Structure	CH_3 $[(\text{CH}_2\text{O})_8 \text{Si}(\text{CH}_3)_2 \text{N}^+\text{C}_8\text{H}_{17}]^-\text{Cl}^-$ CH_3
CTM 0208*	Concentration	42% active ingredient in methanol
CTM 0176	Appearance	Light to dark amber liquid
CTM 0002	Refractive Index at 78.8 F (26 C)	1.390
CTM 0090A	Flash Point, degrees	52 F (11 C)
	Cloud Point, degrees	26 F (-3 C)
	Solubility	Miscible in all proportions with water, alcohols, ketones, esters, hydrocarbons and chlorinated hydrocarbons
	Thermal Stability	Stable to 257 F (125 C)
	Specific Gravity at 77 F (25 C)	0.97
	Freeze-Thaw Stability	Stable through 10 cycles (0 to 122 F/-17.7 to 50 C)

*In most cases, CTM's (Corporate Test Methods) correspond to ASTM standard tests.

Specification Writers: Please contact Dow Corning Corporation, Midland, Michigan, before writing specifications on this product.

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Fungicide, and Rodenticide Act as
amended, this pesticide
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**IMPORTANT INFORMATION ON
STORAGE, HANDLING AND
FLAMMABILITY**

This product is 'flammable' and
'poisonous'.

Storage and Shelf Life

Keep away from heat and open flame.

When stored in original unopened
containers at or below 77 F (25 C),
DOW CORNING 5700 antimicrobial
agent has a shelf life of 12 months from
date of shipment. Since this material is
moisture-sensitive, keep the container
tightly closed after each use.

Handling (Danger)

Wear goggles or face shield and rubber
gloves when handling.

DOW CORNING 5700 antimicrobial
agent, if ingested in amounts incidental
to industrial handling, should pose no
significant adverse health hazard. Direct
contact of the undiluted material with
eyes may cause serious injury. Special
and particular care must be taken to
prevent eye contact. In case of contact
with eyes, immediately flush with large
amounts of water for at least 15 minutes
and get prompt medical attention.
Single, short-term skin exposure may
cause slight irritation. Repeated or
prolonged contact over several days
may cause blistering and a superficial
burn. Precautions should be taken

to avoid prolonged or repeated
skin contact.

DOW CORNING 5700 antimicrobial
agent contains 50% methanol. Keep
away from heat and open flame.
Appropriate measures should be taken
to prevent the accumulation of
hazardous concentrations of methanol
vapors in the work area.

**Neutralization and Environmental
Protection**

DOW CORNING 5700 antimicrobial
agent, by standard BOD (biological
oxygen demand) and TOD (total oxygen
demand) determination, does not
appear to be biodegradable. Potential
harm to the environment is minimized,
however, because of the minimum
amount of chemical applied and its
durable coupling to surfaces.

Every effort should be made to contain
accidental spills of DOW CORNING
5700 antimicrobial agent to the
immediate area. This may be
accomplished by the use of sandbags to
confine the spill in order to facilitate
cleanup and disposal. Contaminated
sand may then be disposed of by soil
burial in an approved landfill. Many spills
may be cleaned up with rags by wiping
and mopping and allowing the liquid to
absorb onto the fabric. These may then
be disposed of by incineration.

Floor drains in areas of material use

should be protected with sandbags to
contain accidental spills.

Acute Oral Toxicity

DOW CORNING 5700 antimicrobial
agent has an extremely low acute oral
toxicity of $LD_{50} = 12.27 \pm 0.16$ g/kg
body weight in albino rats.

Acute Skin Contact

Based on studies conducted on albino
rabbits, undiluted DOW CORNING
5700 antimicrobial agent has a slight to
moderate effect upon intact and
abraded skin. A single exposure for
several hours may cause slight
erythema and edema. Prolonged or
repeated contact over a period of
several days may cause blistering and a
superficial burn.

Repeated Skin Contact

A human repeated insult patch test has
been conducted with a 2.0% aqueous
solution of DOW CORNING 5700
antimicrobial agent on nonwoven
polyester. The results of this study
showed an overall incidence of skin
irritation reactions to be 2/450 or 0.4%.
Two subjects each reacted once to the
applications of the test material; one
with a very slight erythema and the other
with very slight erythema and edema.
There was no evidence of skin sensi-
tization noted with any of the subjects.

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FISH TOXICITY

The results of a four-day static fish toxicity study using rainbow trout and bluegills are summarized below:

Species	4 Day TL Values	
	DOW CORNING 5700 Antimicrobial Agent	Toxaophene
Rainbow trout	0.56 ppm	~0.036 ppm
Bluegills	0.51 ppm	0.024 ppm

Acute Dermal Absorption

DOW CORNING 5700 antimicrobial agent has an extremely low acute dermal toxicity of LD₅₀ >7.95 g/kg body weight in albino rabbits. Therefore, this material does not appear to present a hazard from skin absorption under ordinary industrial handling conditions when good care and cleanliness are practiced.

Percutaneous Absorption

DOW CORNING 5700 antimicrobial agent is not absorbed through the skin of rabbits.

MSDS INFORMATION

ATTENTION: PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY WRITING TO DOW CORNING CUSTOMER SERVICE, OR BY CALLING (517) 496-6000.

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Shipping Limitations

DOT Classification: Flammable.

Packaging

DOW CORNING 5700 antimicrobial agent is supplied in 35- and 400-lb (15.9- and 181.4-kg) containers, net weight.

WARRANTY INFORMATION - PLEASE READ CAREFULLY

Dow Corning believes that the information in this publication is an accurate description of the typical characteristics and/or uses of the product or products, but it is your responsibility to thoroughly test the product in your specific application to determine its performance, efficacy and safety.

Unless Dow Corning provides you with a specific written warranty of fitness for a particular use, Dow Corning's sole warranty is that the product or products will meet Dow Corning's then current sales specifications. **DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR USE.** Your exclusive remedy and Dow Corning's sole liability for breach of warranty is limited to refund of the purchase price or replacement of any product shown to be other than as warranted, and Dow Corning expressly disclaims any liability for incidental or consequential damages.

USERS PLEASE READ

In the manner in which our products are used requires governmental approval or clearance, you must obtain it.

Suggestions of uses should not be taken as inducements to infringe any patents.

ADDITIONAL INFORMATION

For additional information on specific industry applications, refer to supplementary application bulletins. These bulletins can be obtained by writing Dow Corning Corporation, New Ventures Business, Box 0994, Midland, MI, 48646-0994.

REFERENCES

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AUG 26 1991

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MIDLAND, MICHIGAN 48640-0994

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