

1258-1286

10/27/2005

1/10



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg.
Number:1258-
1286

Date of Issuance:

OCT 27 2005

NOTICE OF PESTICIDE:

 x Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

Densil DG 45 Fungicide

Name and Address of Registrant (include ZIP Code):

Arch Chemicals, Inc.
1955 Lake Park Drive
Suite 250
Smyrna, GA 300890

Note: Changes in labeling 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 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.

Registration is in no way to be construed as an endorsement or recommendation of this product by the 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 FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes:

- a. Revise the EPA Registration Number to read, "EPA Reg. No. ~~60000-9~~ 1258-1286".
- b. Add the following restriction statement to your label and technical bulletin:
"Do not use this product to treat metalworking fluids that will be resold for use in non-closed metal cutting systems."
- c. Add the following restriction statement to your label and technical bulletin:
"For use only in closed metalworking and delivery systems only. Do not permit contact with mixer/loaders or machinists."

Signature of Approving Official:

Marshall Swindell
Team 33/RMB1/Antimicrobial Division

Date:

OCT 27 2005

2/16

3. You must submit a testing protocol for a worker exposure study relative to handlers and machinist for "enclosed metalworking fluid systems" within six months of the date of this registration notice. The following toxicology studies are "reserved" pending your submission and the Agency's review and acceptance of the required worker exposure study referenced above.

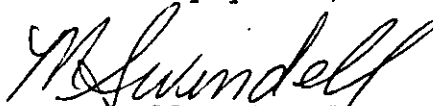
4. You must submit the worker exposure study conducted in agreement with the testing protocol which the Agency approves within one year of the protocol approval.

5. Submit five (5) copies of your final printed labeling before you release the product for shipment.

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

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.

Sincerely yours,



Marshall Swindell
Product Manager 33
Regulatory Management Branch 1
Antimicrobial Division (7510C)

3/10

(Center Panel)

DENSIL® DG 45 Fungicide

For the Preservation of Metalworking Fluids

Active Ingredient:

N-Butyl-1,2-benzisothiazolin-3-one.....45%

Inert Ingredients.....55%

TOTAL.....100%

KEEP OUT OF REACH OF CHILDREN

DANGER

STATEMENT OF PRACTICAL TREATMENT:

IF IN EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

IF ON SKIN: Immediately wash material off skin with soap and plenty of water. If irritation persists, get medical attention. Wash contaminated clothing and decontaminate footwear before use.

IF SWALLOWED: Do not induce vomiting. Never give anything by mouth to an unconscious person. Refer victim to medical personnel.

NOTE TO PHYSICIAN: Possible mucosal damage may contraindicate the use of gastric lavage following ingestion.

SEE ADDITIONAL PRECAUTIONS ON SIDE PANEL

Contents: US Gallons

EPA Reg. No. 1258-

EPA Est. No. 44616-MO-02

Manufactured by:

Arch Chemicals, Inc. 501 Merritt 7
Norwalk, CT
06856 USA

Medical Emergency Information Center 800-654-6911
Chemical Emergency Response Center 800-654-6911

Lot Number:

Product Code:

**ACCEPTED
with COMMENTS
EPA Letter Dated:**

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-1286

4/10

(Left Panel)

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

DANGER

Corrosive. Causes eye and skin damage. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed or absorbed through the skin. May be fatal if inhaled. Do not breathe vapors or spray mist. Wash thoroughly after handling and before eating, drinking, or using tobacco. Remove and wash contaminated clothing before reuse. May cause allergic skin reaction.

ENVIRONMENTAL HAZARDS:

This product is toxic to fish. 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 Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the 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 or disposal of wastes.

**ACCEPTED
with COMMENTS
EPA Letter Dated:**

OCT 27 2005

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.**

1258-1286

(Right Panel)

DIRECTIONS FOR USE: It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. See Technical Information Bulletin for Directions for Use.

PRECAUTIONARY STATEMENTS ON THE OPERATION OF METALWORKING EQUIPMENT WITH MWF CONTAINING DENSIL DG45: Densil DG45 may be used only in enclosed metalworking systems with local exhaust ventilation.

Densil DG45 may NOT be used to preserve metalworking fluids intended for use in machining operations which are not enclosed, even when such operations do not generate significant MWF aerosol. In cases where a central sump is used, Densil DG45 may NOT be used as a post additive treatment for the metalworking fluid unless all machining operations using this fluid are enclosed, even when the unenclosed equipment is not actively in use. See Technical Information Bulletin for additional details.

STORAGE AND DISPOSAL:

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

STORAGE:

Protect from frost. If frozen, thaw and stir well before use.

PESTICIDE DISPOSAL:

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide spray, mixture or rinsate is a violation of Federal law. If these 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.

CONTAINER DISPOSAL:

Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

ACCEPTED
with COMMENTS
EPA Letter Dated:

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-1286



Technical Information Bulletin

DENSIL® DG 45 Fungicide

SUMMARY

DENSIL® DG 45 is an efficient fungicide for aqueous compositions such as metal cutting, metal lubricating, metal cooling, metal cleaning and metalworking fluids. DENSIL® DG45 is based on the active agent, N-butyl-1,2-benzisothiazolin-3-one.

DENSIL® DG 45 is registered with the Environmental Protection Agency and has been granted EPA registration No. 1258- .

Densil DG 45 fungicide is to be used only in enclosed metalworking systems with local exhaust ventilation. See the directions for use section for additional precautionary statements on the operation of metalworking equipment with metalworking fluid containing DENSIL DG 45.

Enclosed metalworking systems are defined as systems in which the metalworking machine or process is enclosed by a box or housing. Openings in the enclosure are limited to the minimum required to allow for part entry/egress, maintenance, or utility access. The enclosure is provided with exhaust ventilation with the replacement air entering through the openings designed into the enclosure.

The enclosure of the machine or process is designed to surround the machining operation such that when MWF aerosol is emitted from the machining operation, it is already contained within the enclosure, thereby isolating the operation from the employee and the workplace. The aerosol is prevented from release at required enclosure openings by an inward flow of air generated by a slight negative pressure. Negative pressure is produced by extraction of air from the enclosure via a local exhaust ventilation system.

PRECAUTIONARY STATEMENTS FOR MAINTENANCE OF METALWORKING EQUIPMENT

Densil DG45 may be used only in enclosed

metalworking systems with local exhaust ventilation. During operation of the MWF system, the enclosure provides a barrier between workers and MWF aerosols generated by the machining operation. However, during maintenance of enclosed metalworking systems, maintenance personnel may be required to open or enter the enclosure. To avoid the exposure of maintenance workers to MWF aerosol, the machining operations must be shut down prior to the start of maintenance.

Where there is potential for maintenance workers to come into contact with metalworking fluid containing Densil DG45, or potential for contact with fluid residues on machine parts, appropriate PPE should be worn. At minimum, maintenance employees should wear gloves and protective workwear designed to protect their skin from contact with bulk metalworking fluid or with fluid residues. Eye protection such as goggles and face shields should be worn to guard against splashing when the metalworking fluid volumes are significant enough to represent a splash risk.

ACCEPTED
with COMMENTS
EPA Letter Dated:

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-1286

INTRODUCTION

Microorganisms can be detrimental to water based metalworking fluids and it is common practice to add antimicrobials or biocides to these fluids. The biocide serves to keep microbial populations in the metalworking fluid static over time, or even serves to reduce or eliminate an established microbial population.

DENSIL DG45 is an efficient biocide for metalworking fluids. It exhibits both excellent fungistatic and fungicidal activity. The active ingredient in DENSIL DG45 is highly efficient against a wide variety of yeasts and fungi. It is also effective against many of the bacterial species commonly found in metalworking systems. However, the degree of bacterial control will depend on the dosage of DENSIL DG45 used, and may also vary from system to system.

BACKGROUND

Water based metalworking fluids are commonly classified into three general categories. These include emulsifiable or soluble oil fluids, semi-synthetic fluids, and synthetic fluids. While the type of metalworking fluid may influence to some extent the type and degree of microbial susceptibility, all types of water based metalworking fluids are susceptible to some form of microbial attack. Bacteria, yeast, molds and fungi are all potential contaminants. The unchecked growth of these organisms can lead to the failure of metalworking systems. Dispersed organisms such as bacteria and yeast can degrade the usability of the metalworking fluid itself. For example, the metabolic activity of these organisms may cause the pH of a metalworking fluid to decrease. This can have deleterious effects on the fluid's performance. Other potential effects of bacteria and yeast include the production of undesirable odors and colors. These organisms can also be associated with corrosion. At high population levels, bacteria and yeast may degrade fluid components to such an extent that separation of the fluid may occur. Unlike bacteria and yeast, fungi are generally not uniformly dispersed in the metalworking fluid. Fungi often accumulate on solid surfaces, especially those that are exposed to both metalworking fluid and air. These organisms tend to grow as filamentous masses; these masses may attain sufficient size to be visible to the naked eye. The presence of these fungal masses can cause severe problems in a metalworking system, such as clogging of lines and filters. Heavy fungal contamination may require a system shutdown so that mechanical and chemical treatments can be used to remove the fungal masses. Lost production time and

used fluid disposal costs can be very expensive. Lastly, even though fungi grow more slowly than bacteria and yeast, they are also capable of degrading fluid components.

PROPERTIES OF DENSIL DG45

Composition: A solution of N-butyl-1,2-benzisothiazolin-3-one in propylene glycol
Physical Form and Appearance: Brown liquid
Odor: Mild or none
Viscosity (22°C): 1000-2000
Specific Gravity (22°C): 1.088 gm/ml (approx)

DENSIL DG45 is supplied as a liquid, with a concentration of 45 percent active ingredient in propylene glycol. The active ingredient exhibits good compatibility with a wide variety of common metalworking fluid ingredients. However, as with any biocide, an assessment of the compatibility of DENSIL DG45 with the metalworking fluid is recommended prior to use. This is especially important when DENSIL DG45 is being incorporated into a metalworking fluid concentrate.

DIRECTIONS FOR USE

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

PRECAUTIONARY STATEMENTS ON THE OPERATION OF METALWORKING EQUIPMENT WITH MWF CONTAINING DENSIL DG45

Densil DG45 may be used only in enclosed metalworking systems with local exhaust ventilation.

Densil DG45 may NOT be used to preserve metalworking fluids intended for use in machining operations which are not enclosed, even when such operations do not generate significant MWF aerosol. In cases where a central sump is used, Densil DG45 may NOT be used as a post additive treatment for the metalworking fluid unless all machining operations using this fluid are enclosed, even when the unenclosed equipment is not actively in use.

ACCEPTED

DENSIL DG45 is an effective biocide in most aqueous metalworking fluids. Principal applications, and the suggested range of concentrations on which trials can be based, are:

OCT 27 2005

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, registered under EPA Reg. No.

Fluid Concentrate

DENSIL DG45 fungicide should be added to metalworking fluid concentrates at a level that ensures the final use dilution fluid will contain 55 to 445 ppm of product (25 to 200 ppm active agent).

Use Dilution Fluid

Note that grossly contaminated systems may require mechanical removal of fungal masses, and cleaning of the system before biocide treatment is begun.

Initial Dose: For a noticeably fouled system, add 0.47 to 3.94 lbs. (7 to 55.6 fl. oz.) of DENSIL DG45 fungicide per 1000 gallons of fluid. This will generate a concentration of 25 to 200 ppm active agent.

Subsequent Dose: For maintenance of a clean system, add 0.09 to 0.58 lbs. (1.3 to 8.6 fl. oz.) of DENSIL DG45 fungicide per 1000 gallons of fluid on a periodic basis to maintain microbial control. This quantity will generate a fungicide concentration of 5 to 30 ppm active agent. The frequency of maintenance dosing will be effected by the amount of fluid lost to drag out and other displacements, but also by the severity of the contamination, by the system design, by the effectiveness of system filtration, and by other system variables.

ACCEPTED
with COMMENTS
EPA Letter Dated:

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-1286

KEEP OUT OF REACH OF CHILDREN

DANGER

Precautionary Statements

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Corrosive. Causes eye and skin damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful if swallowed or absorbed through the skin. May be fatal if inhaled. Wash thoroughly after handling and before eating, drinking, or using tobacco. Remove and wash contaminated clothing before reuse. May cause allergic skin reactions.

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and treated by medical personnel.

IF ON SKIN: Immediately wash material off skin with soap and plenty of water. If irritation persists, get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

IF SWALLOWED: Do not induce vomiting. Avoid alcohol. Never give anything by mouth to an unconscious person. Refer victim to medical personnel.

Note to Physician: Possible mucosal damage may contraindicate the use of gastric lavage following ingestion.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not discharge 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 local State Water Board or Regional Office of the EPA. Do not contaminate water by cleaning of equipment or disposal of wastes.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Storage

Protect from frost. If frozen, allow to thaw and stir well before use.

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these 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.

Container Disposal

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

SAFE HANDLING INFORMATION

Refer to the Material safety Data Sheet (MSDS) available from Arch Biocides for information on the safe use, handling and disposal of this product.

For literature, sample and order information, please contact our Customer Service office: 800-344-9168.

For more information, visit our website at www.archbiocides.com.

**ACCEPTED
with COMMENTS
EPA Letter Dated:**

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-12.86

10/10

ACCEPTED
with COMMENTS
EPA Letter Dated:

OCT 27 2005

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No.

1258-1286

Densil is a registered trademark
of Arch UK Biocides Ltd.

FOR YOUR PROTECTION

Arch Inc. (Arch®) warrants that this product conforms to the chemical description on the label and that it is reasonably fit for the purposes stated on the label when used in accordance with Arch® directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Arch, and the buyer or user assumes the risk of any such use. ARCH DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING

ANY WARRANTY OF MERCHANTABILITY. (Statements herein, therefore, should not be construed as representations or warranties.)

IN NO EVENT SHALL ARCH BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING MOST PROFITS, ON ANY THEORY, WHATSOEVER, INCLUDING NEGLIGENCE, and Arch's sole liability and Buyer's and User's exclusive remedy shall be limited to the refund of the purchase price. Statements concerning the use of the products or the formulations described therein are not to be

construed as recommending the infringement of any patent and no liability for infringement arising out of any such use is assumed.

Arch Chemicals, Inc.
501 Merritt 7
Norwalk CT 06856