

JUN 24 1994

Mr. Paul R. Larson
UCB Chemicals Corporation
5505-A Robin Hood Road
Norfolk, VA 23513

Dear Mr. Larson:

Subject: Thionic[®] ziram technical
EPA Registration No. 45722-14
Applications Dated September 29, 1993 and April
19, 1994, Request for Product Name Change, Submission
of Revised Confidential Statement of Formula and
Revised Labeling

The proposed Confidential Statement of Formula submitted
on EPA Form 5570-4 and dated April 19, 1994 has been reviewed
and is acceptable as an amendment to this pesticide product
registration under the Federal Insecticide, Fungicide and
Rodenticide Act as amended. A copy of that formula has been added
to the records for this product.

We shall change the name of record for this product
as requested in your September 29, 1993 application.

The proposed revised labeling submitted with your April
19, 1994 application has also been reviewed and is acceptable
under the Act provided that you:

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

If this condition is not complied with, the registration
will be subject to cancellation in accordance with FIFRA,
section 6(e). Your release for shipment of the product con-
stitutes acceptance of this condition.

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

Sincerely yours,

BEST AVAILABLE COPY

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure
E.wilson:Diskette ABC13:06-04-94

THIONIC^(R) ZIRAM TECHNICAL

Active Ingredient:
Ziram (Zinc dimethyldithiocarbamate).....98.0%
Inert Ingredients:.....2.0%
Total 100.0%

ACCEPTED
with COMMENTS
In EPA Letter Dated

JUN 24

Keep out of Reach of Children
PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
45728-14

DANGER PELIGRO

DANGER: CORROSIVE. Causes irreversible eye damage. May be fatal if swallowed or inhaled. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Do not breathe dust. Wear a mask or pesticide respirator jointly approved by the Mining Enforcement and Safety Administration, and the National Institute for Occupational Safety and Health. May cause skin sensitization in certain individuals. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before re-use.

First Aid: In case of contact, immediately flush eyes or skin with plenty of water. If in eyes, call a physician. If swallowed, drink large quantities of water and seek medical attention immediately.

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 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 when disposing of equipment washwaters.

DIRECTIONS FOR USE

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

For use only by manufacturers in the formulation of animal repellents, fungicides or in the formulation of products for which no pesticidal claims are made in regard to the manufacture, sale or distribution of the finished product as to protection of other surfaces or objects. This product may be used in the formulation of fungicide products for the following uses: almonds, apples, apricots, blueberries, caneberries and brambles (including blackberries, boysenberries, dewberries, loganberries, raspberries, and youngberries), cherries, grapes, nectarines, ornamentals and ornamental fruit varieties, peaches, pears, pecans, peppers, quince, strawberries and tomatoes. This product may be used in the formulation of the following nonpesticide products: latex paint, paper and paperboard, paper coatings, adhesives, and industrial yarns and fabrics. See Bulletin Thionic-01 for directions for these uses. Subsequent formulators are responsible for providing documentation to support the registration of their product(s).

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry place in the original container and away from sources of ignition.

PESTICIDE DISPOSAL: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Completely empty bag into application equipment. 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 smoke.

UCB Chemicals Corporation makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label.

Net Wt. 55 Pounds (25 kg)



UCB Chemicals Corporation
5505-A Robin Hood Road
Norfolk, Virginia 23513

EPA Reg. No. 45728-14

EPA Est. 32557-BL-1

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THIONIC[®] ZIRAM TECHNICAL

DESCRIPTION

This Technical Bulletin is directed to formulators and their personnel to provide adequate information on the product. This information should be considered the basis for development and utilization of safe and proper handling procedures. For any further information, contact UCB Chemicals Corporation.

CHEMICAL FORMULA



PHYSICAL AND CHEMICAL PROPERTIES

- Active Ingredient

Zinc dimethyldithiocarbamate98%

- Physical State

Creamy-white powder

- Odor

Nil

- Melting Point

Decomposes > 250 °C

- pH (in 4% aqueous suspension)

7.29

- Solubility (in H₂O)

Soluble in part

- Bulk Density (g/cc)

0.25

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PACKAGING

55 Pounds net multi-ply paper bags or other approved packaging.

CHEMICAL REACTIVITY

Ziram is stable and non-corrosive. However, excessive heat and moisture should be avoided as should contact with strong oxidizers.

Contact with inorganic acids liberates carbon disulfide.

Incompatible with copper and mercury compounds.

FLAMMABILITY AND FIREFIGHTING

This product is considered noncombustible. However, under fire conditions, it may decompose and emit toxic fumes of carbon, nitrogen and sulfur oxides.

Use standard extinguishing media - water, carbon dioxide, dry chemicals, or foam. When there is a potential for exposure, wear a self-contained breathing apparatus in positive pressure mode. In addition, impervious clothing should be worn.

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 Pollutant 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 when disposing of equipment washwaters.

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TOXICOLOGY

TOXICITY TO ANIMALS*

- Oral - - - - - LD₅₀(mg/kg) 320* (rat)
- Dermal - - - - - LD₅₀(mg/kg) > 2,000* (rat)
- Inhalation- - - - - LC₅₀(mg/l) 0.07* (rat)
- Primary Eye Irritation - - - - - Corrosive* (rabbit)
- Primary Skin Irritation - - - - - No irritation (4-hrs)* (rabbit)
- Skin Sensitization - - - - - Sensitization rate of 30%* (guinea pig)

* UCB Proprietary Study

HUMAN TOXICITY

ZIRAM is irritating to eyes, nose, throat, and skin.

May be fatal if swallowed or inhaled.

Harmful if absorbed through skin.

An antabuse-like reaction with flushing, sweating, headache, weakness and hypotension may occur when ethyl alcohol (alcoholic beverages) is ingested following exposure to this material.

Symptoms: Rhinitis, laryngitis, pharyngitis, gastritis, dermatitis disorders in metabolism, blood picture and in liver function.

SAFETY MEASURES, FIRST AID

- Wear rubber gloves, inhalation mask or respirator, safety goggles or face shield, and coveralls.
- Provide adequate ventilation.
- Keep out of reach of children and away from food, drink, and animal feeding stuffs.
- Wash thoroughly with soap and water after handling.

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In case of contact with eyes, rinse immediately with plenty of water and contact a physician.

- In swallowed, drink large quantities of water and seek medical attention immediately.
- Store in a cool dry place, away from sparks or open flame.

APPLICATIONS

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

For use only by manufacturers in the formulation of:

- 1) Animal repellents;
- 2 Fungicides;

This product may be used in the formulation of fungicide products for the following uses:

- | | |
|----------------------------|------------------------------|
| ★ Almonds | ★ Nectarines |
| ★ Apples | ★ Ornamentals |
| ★ Apricots | ★ Ornamental Fruit Varieties |
| ★ Blueberries | ★ Peaches |
| ★ Caneberries and Brambles | ★ Pears |
| including: ★ Blackberries | ★ Pecans |
| ★ Boysenberries | ★ Peppers |
| ★ Dewberries | ★ Quince |
| ★ Loganberries | |
| ★ Raspberries | |
| ★ Youngberries | |
| ★ Cherries | ★ Strawberries |
| ★ Conifers/Pine Seedlings | ★ Tomatoes |
| ★ Grapes | |

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3) Products for which no pesticidal claims are made in regard to the manufacture, sale or distribution of the finished product as to protection of other surfaces or objects.

This product may be used in the formulation of the following non-pesticide products:

- ★ latex paint
- ★ paper and paperboard
- ★ paper coatings
- ★ adhesives
- ★ industrial yarns and fabrics

Use Directions

Mold inhibitor for Latex Paint - Exterior exposure testing suggests certain loadings as starting points for the evaluation of THIONIC. For exterior latex paints, use 1 to 3% of THIONIC based on total weight (equal to about 10 to 30 lbs. per 100 gallons), added during the pigment-dispersion stage of manufacture.

Do not use in formulation containing metallic drier.

Mold Resistant Paper and Paperboard - To impart mold resistant properties to paper or paperboard, apply as a surface treatment on size press or calendar stack. THIONIC diluted as required to retain 0.5% solids on the weight of the sheet. See TAPPI Standard T487M-54 for mold resistance evaluation method. Do not use for the manufacture of mold-resistant paper or paperboard intended for food packaging purposes.

Preservation of Paper Coatings - To preserve non-food contact paper coatings, add 0.1% THIONIC by weight of the dry starch or protein.

Preservation of Adhesives - To preserve starch and synthetic latex adhesive formulations (dry, after water is added by end-user) against bacterial degradation add 0.185% to 0.5% THIONIC by weight of total composition, during manufacture of adhesive composition. This product is cleared for use in adhesives used in food packaging (FDA §175.105).

Preservation of Industrial Yarns and Fabrics - For long-term protection of industrial yarns and fabrics from mildews, rots and bacterial decomposition, use 1.25% ± 0.25% THIONIC based on the weight of the material applied in water dispersion.

IMPORTANT

Consult with UCB or the Environmental Protection Agency to obtain information on currently registered uses for Ziram as they are subject to change.

Subsequent formulators are responsible for providing documentation to support any required registration of their product(s).

Thionic® is a registered trademark of UCB S.A., a Belgian corporation.

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