

71227-7

7/11/2006

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

071106

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Ms. Erin Tesch  
Regulatory Consultant for,  
Sinanen Company, Ltd.  
c/o Technology Sciences Group, Inc.  
Suite 500  
Washington, D.C. 20036

Subject: Zeomic Type AC Silver Copper Zeolite A  
EPA Registration Number 71227-7  
Your Submission Dated May 19<sup>th</sup>, 2006  
EPA Received Date May 19<sup>th</sup>, 2006

The letter conditionally extends the expiration date to 4/1/07 for the following label use categories which received time-limited approval until 4/1/07 in the letter of that same date:

Indirect/direct food contact (limited to specific uses listed on the stamped label)  
Drinking water contact (limited to specific uses on stamped label)  
HVAC (limited to specific uses listed on stamped label)

1. The data you recently submitted or cited, to satisfy the following time limited data listed in EPA letter dated 6/13/02, must be found fully accepted:

Sub-Chronic rodent feeding study  
Sub-Chronic non-rodent feeding study  
Developmental toxicity study  
Mammalian cells in culture forward gene mutation assay  
In-vivo cytogenes via metaphase analysis  
Microbucleus assay  
Two-generation reproductive study

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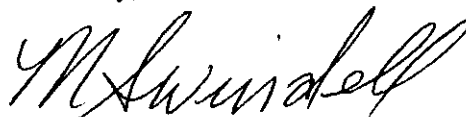
An aggregate risk assessment under FIFRA section 2(b), using all submitted/cited, must result in a determination by the Agency that the food, drinking water, HVAC and all other non-food, drinking water, HVAC and all other non-food/water uses listed on the label will not result in un-reasonable adverse effects to humans or the environment. If the Agency is unable to make this determination for each label use, then the label uses which are found to pose an unreasonable risk will expire on 4/1/07 and must be deleted.

The revised labeling submitted to lower the minimum loading rate from 0.5% to 0.1% has been reviewed and found to be acceptable.

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

If you have any questions concerning this letter, please contact Karen M. Leavy-Munk at (703)-308-6237.

Sincerely,



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

# Zeomic® Type AC Silver Copper Zeolite A.

A preservative and bacteriostatic agent for use in the manufacture of polymer, plastic, latex and cellulosic products.

For commercial and industrial use only.

**Active Ingredient:**

Silver	3.5 %
Copper	6.1 %
Other Ingredients	90.4 %
Total	100.0 %

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

**SEE INSERT LABEL FOR PRECAUTIONARY STATEMENTS**

Manufactured for:  
AgION Technologies Inc.  
60 Audubon Road  
Wakefield, MA 01880

EPA Registration No. 71227-7  
EPA Establishment No. 71227-JP-001

Net Wt. XXXX

Lot No. XXXXXXXXXX

**ACCEPTED**  
**with COMMENTS**  
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**071106**

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

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## Directions for Use

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

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

***Zeomic® Type AC Silver Copper Zeolite A*** is an antimicrobial additive to be used by compounding into many polymeric materials. It is designed to be incorporated during the manufacturing process to impart antimicrobial activity to the manufactured products. ***Zeomic® Type AC Silver Copper Zeolite A*** suppresses the growth of algae, mold, mildew, fungi and bacteria which cause unpleasant odors, discoloration, staining, deterioration or corrosion only. No finished product incorporating ***Zeomic® Type AC Silver Copper Zeolite A*** may make any public health claims relating to antimicrobial activity without first obtaining an EPA registration for the finished product which permits such claims. When incorporated into treated articles, this product does not protect users of any such treated article or others against food borne or disease causing bacteria, viruses, germs or other disease causing organisms.

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## Types of Finished Products

### **Plastics - including films, sheets, slabs, and molded plastic parts**

The additive may be incorporated into the finished product at up to 5.0% by weight or at least 0.3% for bulk plastics. Contact Sinanen Company Ltd. to determine the appropriate amount of Zeomic® Type AC Silver Copper Zeolite A for individual finished products.

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

Automobile Parts  
 Shower curtains  
 Mats  
 Protective Covers  
 Waste containers  
 Brush handles  
 Mops  
 Vacuum cleaner bags  
 Plumbing supplies and fixtures  
 Drain pan liners  
 Siding for housing  
 Kitchen and bathroom hardware  
 Flooring  
 Floor coverings  
 Insulation for wire and cable  
 Insulators  
 Indoor and outdoor furniture  
 Spas, bathtubs, showers, filters and components thereof.  
 Garbage bags and garbage cans  
 Plastic building materials

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### **Fibers – including cotton, rayon and synthetically derived fibers**

The additive may be incorporated into the finished product at up to 5.0% by weight or at least 0.1% for fibers. Contact Sinanen Company, Ltd. to determine the appropriate amount of **Zeomic® Type AC Silver Copper Zeolite A** for individual finished products.

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

Synthetic and Natural Fibers  
 Paper for gypsum board.  
 Paper, paperboard, composite building materials

### **Coatings, Films and Laminates**

The additive may be incorporated into the finished product at up to 5.0% by weight, or at least 0.5% for coatings. Contact Sinanen Company, Ltd. to determine the appropriate amount of **Zeomic® Type AC Silver Copper Zeolite A** for individual finished products. Types of coatings include water-borne, solvent-borne, 100% solids, radiation cure, liquid and powder.

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

Building Materials (including gypsum board, insulation, cellulose or fiberglass ceiling tile, and polymer flooring.)

Heating, Ventilation and Air Conditioning equipment and related materials (including insulation, ducts, heat exchangers, drain pans, air filters, air purifiers, diffusers, and parts and components thereof)<sup>1</sup>

Industrial equipment

Furniture

Automotive and vehicular parts

Packaging

Siding

Roofing

Shingles

Industrial equipment

### **Adhesives and Sealants**

The additive may be incorporated into the finished product at up to 5.0% by weight, or at least 0.5% for adhesives and sealants. Contact Sinanen Company, Ltd. to determine the appropriate amount of **Zeomic® Type AC Silver Copper Zeolite A** for individual finished products.

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

Adhesives, joint compound and grout for gypsum board, ceramic tile, wood, paper, cardboard, rubber and plastic.

### **Miscellaneous Applications**

The additive may be incorporated into the finished product at up to 5.0% by weight. Contact Sinanen Company, Ltd. to determine the appropriate amount of **Zeomic® Type AC Silver Copper Zeolite A** for individual finished products.

**Do not use for any application involving direct or indirect contact with food, drinking water, or packaging.**

Interior paints and coatings

Stucco

Plaster

Leather

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<sup>1</sup> For HVAC and related uses, refer to Zeomic® AC Technical Bulletin No. 1 – Technical Bulletin for Zeomic® Type AC Silver Copper Zeolite A Polymeric Coating for Heating, Ventilation and Air Conditioning Applications.

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans: Caution.** Causes moderate eye irritation. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water of 15 – 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	

**Storage and Disposal**

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

**Pesticide Storage:** Do not store in areas accessible to children. Keep product dry and containers covered during storage; store below 130°F.

**Container Disposal: Inner Plastic Bag:** Completely empty plastic bag into application equipment. Then 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. **Outer Steel Can:** 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.

**Pesticide Disposal:** Wastes from the use of this product may be disposed of on site or at an approved waste disposal facility.

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with COMMENTS  
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*07/11/08*

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

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Zeomic® Type AC Silver Copper Zeolite A (EPA Reg. No. 71227-7)  
Label Amendment 5-19-06  
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**Zeomic® AC Technical Bulletin No. 1**  
**TECHNICAL BULLETIN FOR ZEOMIC® TYPE AC**  
**SILVER COPPER ZEOLITE POLYMERIC COATING**  
**FOR HEATING, VENTILATION AND AIR CONDITIONING**  
**APPLICATIONS**

**Read the product label first.** Refer to the product label and MSDS for complete directions on safety precautions, storage and handling.

Zeomic® Type AC Silver Copper Zeolite (Zeomic) contains 3.5% by weight silver and 6.1% copper by weight in a natural zeolite carrier. Zeomic is registered by the U.S. Environmental Protection Agency for use in plastics, fibers, coatings, films, laminates, adhesives and sealants. In coatings applied to Heating, Ventilation and Air Conditioning (HVAC) systems and components thereof, the antimicrobial additive is incorporated into a coating to preserve, keep odor-free and operational the components of the HVAC system. These applications apply only during the original manufacture of HVAC systems and components, and are not for use on existing or in place HVAC systems and components. This product is compatible with the substrates and products listed under "Approved Uses."

Incorporate this product into coatings that are intended for application to the surface of articles. The purpose of the coating is to preserve, keep odor-free and operational the components of the HVAC system. The purpose of Zeomic® in the coating is to inhibit the growth of mold, mildew, fungus and bacteria that cause odor, discoloration, staining, deterioration or corrosion on the surface of the coating film. The product protects the applied coating itself from microorganism attack, not the underlying substrate. This product is not intended for remediation, prevention or control of existing or anticipated public health related microorganisms.

**Product Description:**

Zeomic® Type AC Silver Copper Zeolite (Zeomic) contains 3.5% by weight silver and 6.1% copper by weight in a natural zeolite carrier.

**Claims:**

When incorporated into a coating, the Zeomic will inhibit the growth of mold, mildew, fungus and bacteria that cause odor, discoloration, staining, deterioration or corrosion on the surface of the coating film. The product protects the applied coating itself from microorganism attack, not the underlying substrate.

**Important for HVAC Articles:** Zeomic does not protect building occupants from disease-causing bacteria, viruses, mold or mildew or airborne allergens. Always clean and maintain the heating, ventilation and air conditioning system in accordance with the manufacturer's directions.

**Technical Data:**

Active Ingredient: 3.5% Silver, 6.1% Copper  
Color: Light Blue  
Physical State: Dry Powder

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Flammability: Not Flammable  
Specific Gravity:  $2.15 \pm 0.1 \text{ g/cm}^3$   
pH: 7-9 (1g Zeomic/100 ml water)  
Thermal Stability: 800 °C

**Approved Uses:**

For use in polymeric coatings and adhesives, including aqueous, aqueous/solvent solutions, protectorant wax or silicone technology to treat –

- Heating, Ventilation and Air Conditioning systems and related materials (including insulation, air handlers, ducts, heat exchangers, drain pans and liners thereof, air filters, air purifiers, diffusers, humidifiers and parts and components thereof),

**How to Use Zeomic:**

**Surface Preparation:**

**Metal Surfaces:** Apply only to clean dry surfaces free of all dirt, grease or impurities. Abrade all surfaces to remove all surface rust and corrosion products, and wash the intended surface with the appropriate cleaner, rinse and allow to dry thoroughly. Use surface pretreatments or primer coatings as required.

**Painted Surfaces:** Apply only to clean dry surfaces free of all dirt, grease or impurities. Wire brush painted surfaces removing all flaking, loose or chalking material. Sand all glossy surfaces to roughen the entire area. Use surface pretreatments or primer coatings as required.

**Mixing:**

Incorporate Zeomic directly into formulations developed for the coating of heating, ventilation and air conditioning system applications. Maintain constant agitation of the coating during the application process.

**Application:**

Following the surface preparation steps, various coating technologies may be used to apply the Zeomic compound, including automated dip, flow, roll or electro-deposition coating and manual brush, roller or spray coating.

Automated Processes:

Circulate Zeomic and coating via a closed system maintaining agitation. Ensure excess coating applied via dip, flow or roll coating technologies is collected and returned to the system. Maintain constant solids concentration by the addition of fresh, properly mixed coating to make up for usage. Minimize evaporation of the coating by maintaining covers on storage vessels. Utilize appropriate drying conditions, including infrared or conventional ovens to properly cure coating incorporating the Zeomic compound. These processes must be conducted in accordance with federal, state and local air pollution laws and regulations.

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Apply coating to all surfaces at a rate to achieve a dry film thickness of approximately five (5) to twenty five (25) microns.

See handling instructions below for operator exposure requirements.

Manual Processes:

Zeomic may be incorporated into polymer adhesives and coatings and applied manually by brush, roller, spray or other coating technology. These products may be easily applied by high volume low-pressure (HVLP) spray equipment commonly used throughout the industry. These processes must be conducted within a downdraft spray booth permitted and operating in accordance with federal, state and local air pollution laws and regulations.

Apply coating to all surfaces at a rate to achieve a dry film thickness of approximately five (5) to twenty five (25) microns.

See handling instructions below for operator exposure requirements.

**Contact Sinanen Zeomic Co., LTD to confirm optimum application technology and drying conditions, such as time and temperature, for each application before use in a commercial process.**

**Clean up:**

Use fresh water or solvent to clean brushes and equipment before product dries.

**Handling Instructions:**

Wear goggles or face shield and rubber gloves when handling the dry powder.

Airborne Exposure Limits pursuant to OSHA 1910.1000 Table Z-3 for Mineral Dust

<u>Permissible Exposure Limit (PEL)</u>	
Respirable fraction:	5 mg/m3
Total dust:	15 mg/m3

As with any fine powder, avoid generating dust.

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is preferred to help control the emissions of the contaminant at the source, preventing its dispersion through the work area.

**Personal Respirators (NIOSH Approved):**

If the exposure limit is exceeded, a half-face respirator with filter appropriate for 1-micron dust may be worn per appropriate guidelines.

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**Storage and Disposal:** Do not contaminate water, food or feed by storage and disposal.

**Pesticide Storage:** Do not store in areas accessible to children. Keep containers covered during storage; store below 130°F.

**Container Disposal: Inner Plastic Bag:** Completely empty plastic bag into application equipment. Then 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. **Outer Steel Can:** 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.

**Pesticide Disposal:** Wastes from the use of this product may be disposed of on site or at an approved waste disposal facility.

### PRECAUTIONARY STATEMENTS

**Hazards to Humans:** Harmful if inhaled or absorbed through skin. Causes moderate eye irritation. Avoid breathing dust. Avoid contact with skin, eyes or clothing. Wear goggles or face shield and rubber gloves when handling the dry powder. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**First Aid:**

**If on skin:** Wash with plenty of soap and water.

**If inhaled:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**If in eyes:** Flush with plenty of water. Call a physician if irritation persists.

**MSDS Information:**

Refer to the Material Safety Data Sheet for this product for complete handling and safety information.

**Transportation Information:**

Zeomic is not regulated as a hazardous material under DOT.

**Regulatory Information:**

Zeomic is registered by the U.S. Environmental Protection Agency as EPA Reg. No. 71227-7

**For technical assistance or questions contact:**

Sinanen Zeomic Co., LTD.  
4-22, Kaigan 1-Chome, Minato-ku  
Tokyo 105-8525, Japan

Questions? 011-81-3-5470-7125

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**Important: Warranty and Disclaimer Information**

Sinanen Zeomic Co., LTD warrants that each of its products will be manufactured in accordance with Sinanen's specifications in effect on the date of manufacture. **SINANEN MAKES NO OTHER WARRANTIES AND EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** If a product fails to meet this limited warranty purchaser's sole and exclusive remedy is replacement of the product or, at Sinanen's option, refund of the purchase price. **SINANEN'S ACCEPTANCE OF ANY ORDERS FOR THIS PRODUCT IS EXPRESSLY CONDITIONAL UPON PURCHASERS' ASSENT TO THE TERMS ON THE APPLICABLE INVOICE.**

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