PRECAUTIONARY STATEMENTS:
HAZARDS TO HUMANS AND DOMESTIC ANIMALS:
DANGER: Corrosive. Causes irreversible eye and skin burns. Harmful if swallowed or absorbed through skin or inhaled. Do not get in eyes, on skin, or on clothing. Do not breathe spray mist. Wear goggles or face shield and rubber gloves when handling. May be fatal if inhaled. Do not breathe vapors. Use with adequate ventilation. If needed, use NIOSH certified respirator for organic vapors, mists and fumes. Wash thoroughly after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

FIRST AID:
If In Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor.
If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician:
Probable mucosal damage may contraindicate the use of gastric lavage following ingestion.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR ADDITIONAL INFORMATION IN CASE OF EMERGENCY CALL TOLL FREE 1-800-005-9911.

ENVIRONMENTAL HAZARDS: This product is toxic to fish. Do not discharge effluent containing this product into lakes, ponds, streams, 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 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.

PESTICIDE STORAGE: Protect from frost. Do not freeze. If frozen, allow to thaw and stir well before use.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticides, spray materials or rinses 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 for guidance.

Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinse into application equipment or a mix tank or store rinse for later use or disposal. Repeat this procedure two more times.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container promptly after emptying. 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.

VANQUISH 100 ANTIMICROBIAL
For Direct Incorporation into Plastic, Rubber Construction Materials and coatings for Further Processing

Active Ingredient:
N-Butyl-1,2-benzisothiazolin-3-one 99.2%
Inert Ingredients: 0.8%
Total Ingredients: 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

See Additional Precautionary Statements on Side Panel

MANUFACTURED FOR:

ARCH Chemicals, Inc.
5660 New Northside Drive, Suite 1100
Atlanta, GA 30328

Made in UK.

VANQUISH® is a registered trademark of Arch UK Biocides, Ltd.

EPA Reg. No. 1258-1249

EPA EST NO. 1258-NY-3

NET WEIGHT: 200 KGS
**DIRECTIONS FOR USE:**

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING

Plastics: Many plastics are considered to be resistant to microbial attack, but there are significant exceptions that merit preventative action by the use of antimicrobial additive. Plasticized PVC, polyurethane and silicones are particularly susceptible. The biodeterioration of products based on those types of plastics can be a serious problem for manufacturers. Failure to add the proper amount of antimicrobial additive can lead to premature product failure due to loss of mechanical strength, flexibility or adhesive strength. Also, adverse aesthetic problems such as musty odor, permanent staining or microbial surface growth can lead to customer complaints. **VANQUISH® 100 Antimicrobial** is effective against the microbes which degrade plastics (and plastic additives) or natural rubber and can increase the useful life of articles made from these materials. **VANQUISH® 100 Antimicrobial** is effective in most plastic compositions and can be used to preserve natural rubber and such plastics as PVC, polyurethane, silicone, acrylics, and others to produce articles such as: coated fabric (e.g., shoes, raincoats, tents, seat covers), floor coverings, underlay for mats, vinyl wall coverings, tarps, awnings, roofing membranes, synthetic leather (e.g., sneakers and training shoes upper), swimming pool liners, ornamental pond liners, appliance gaskets (e.g., washers, refrigerators), shoe soles, mid-soles and outer, sealants, sealers, coatings, caulks, weather stripping and non-food contact adhesives, pet toys and general household items (shower curtains, bath mats, sink drain mats, rubber or plastic coated wire shelving and dish drainers), auto parts (e.g., wiper blade, tires, floor mats, shock absorbers), foam (e.g., seat cushions, gaskets, insulation), tubing (e.g., marine hose and skiing), electrical and pipe wrap, furniture (e.g., outdoor, leisure, water bed liners, cushions, covered foam mattress pads, covered foam pillow cushions). Do not use this product to treat food/feed or drinking water contact items or toys. **VANQUISH® 100 Antimicrobial** has been found to be an effective polymer preservative at concentrations of 0.03% to 1.0% based on the total weight of the substrate. Typical range of concentrations on which trials can be based are:

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>% VANQUISH® 100 Antimicrobial (based on total weight of final product)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasticized PVC</td>
<td>0.03 to 0.5%</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>0.05 to 0.5%</td>
</tr>
<tr>
<td>Silicones</td>
<td>0.05 to 1.0%</td>
</tr>
<tr>
<td>Polyster</td>
<td>0.05 to 1.0%</td>
</tr>
<tr>
<td>Polyolefins</td>
<td>0.05 to 1.0%</td>
</tr>
<tr>
<td>Acrylics</td>
<td>0.05 to 1.0%</td>
</tr>
<tr>
<td>Synthetic elastomers such as: butadiene-styrene, styrene- isoprene and acrylnitrile-butadiene-styrene</td>
<td>0.03 to 1.0%</td>
</tr>
<tr>
<td>Natural latex rubber</td>
<td>0.03 to 0.5%</td>
</tr>
</tbody>
</table>

The concentration required to give protection depends on several factors. These include the susceptibility of the system to microbiological degradation, the extent to which micro-organisms can gain access, the species involved, pH, temperature, moisture and length of time for which protection is required.

**INCORPORATION OF VANQUISH® 100 ANTIMICROBIAL INTO POLYMERS**

**PVC plastics**: For addition to PVC plastisol, **VANQUISH® 100 Antimicrobial liquid** may be added along with the other additives. Use levels should be calculated based upon the total weight of the formulation.

**Cross Linked Polyurethane**: For addition to cross linked polyurethane **VANQUISH® 100 Antimicrobial liquid** should be added to the polyol at a concentration that will yield the desired use level in the final product after reaction with the isocyanate component. **VANQUISH® 100 Antimicrobial** may also be incorporated at an injection port of a reaction injection molding (RIM) machine.

**Melt Processed Polymers**: For addition to melt processed polymers (PVC, thermoplastic polyurethane, synthetic elastomers and thermoplastic acrylics etc.) **VANQUISH® 100 Antimicrobial liquid** can be metered into the melt to yield the desired end use concentration. For example, at the injection point in an extrusion system. Alternatively, **VANQUISH® 100 Antimicrobial** liquid may be blended with non preserved chips in the users plant to yield the desired end use concentration upon subsequent melt processing. For thermoplastic polyurethane, concentrated granules may also be produced by absorbing **VANQUISH® 100 Antimicrobial** liquid in granules through shear mixing (up to 20% **VANQUISH® 100 Antimicrobial**). These can be blended with non preserved polymer chips in the users plant to the desired use concentration and then further therm processed (i.e. via extrusion).

**PVAC**: **VANQUISH® 100 Antimicrobial liquid** may be added to the mixed liquid components added to a blend of PVC resin and solids, sheet mixed until a dry blend is achieved and then processed through extrusion, calendaring, molding or other system.

**Acrylics**: In addition to the above, **VANQUISH® 100 Antimicrobial liquid** can be added to the liquid monomers before polymerization, at levels to yield the desired use level in the final product after polymerization.

**Silicone**: For silicone sealants, the **VANQUISH® 100 Antimicrobial liquid** may be added to the silicone oil before processing, or to the manufacturing vessel before packing off.

**Natural Rubber**: **VANQUISH® 100 Antimicrobial** can be added to the latex.

The Arch Technical Service Group can provide additional guidance on the proper use of **VANQUISH® 100 Antimicrobial**.

*Vanq100 Aml: 06/14/2011*
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KEEP OUT OF REACH OF CHILDREN

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MANUFACTURED FOR:

ARCH Chemicals, Inc.

1200 Bluegrass Lakes Parkway
Alpharetta, GA 30004

Made in UK.

VANQUISH® is a registered trademark of Arch UK Biocides, Ltd.

EPA Reg. No. 1258-1249
EPA Est. No. 1258-NY-3

Net Weight: 440 Lbs
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