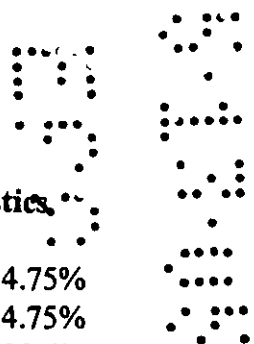


(Center Panel)

**Vanquish SL 10 Antimicrobial**

**An Anti-microbial / Anti-fungal Additive for Plastics**

Active Ingredients:	N-butyl-1,2-benzisothiazolin-3-one.....	4.75%
	Zinc 2-pyridienthiol-1-oxide.....	4.75%
Inert Ingredients:	.....	90.5%
Total Ingredients:	.....	100.0%



**KEEP OUT OF REACH OF CHILDREN**

**WARNING**

**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. 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 by a poison control center or doctor. Do not give anything to an unconscious person.

**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

**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.

For additional information in case of emergency call toll free 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

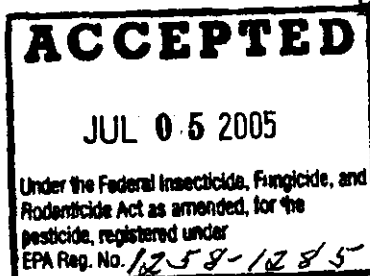
**NOTE TO PHYSICIAN:** Possible mucosal damage may contraindicate the use of gastric lavage following ingestion

SEE ADDITIONAL PRECAUTIONARY STATEMENTS ON SIDE PANEL

Contents: US Gallons

EPA Reg. No. 1258-1285

EPA Est. No. 74637-GBR-001



286

Manufactured for:  
Arch Chemicals, Inc.  
501 Merritt 7  
Norwalk, CT 06856

Lot Number:

Product Code:

Vanquish is a Registered Trademark of Arch UK Biocides LTD

**ACCEPTED**  
  
JUL 05 2005  
Under the Federal Insecticide, Fungicide, and  
Rodenticide Act as amended, for the  
pesticide, registered under  
EPA Reg. No. 1258-1285

(Left Panel)

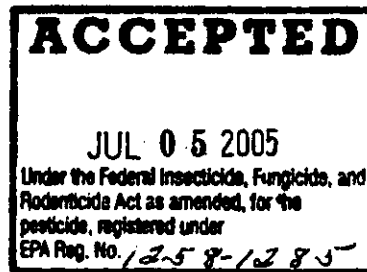
**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**WARNING**

Causes skin irritation and moderate eye irritation. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and chemical resistant gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

**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 by cleaning of equipment or disposal of wastes.



(Right Panel)

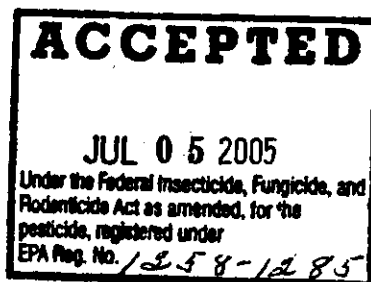
#### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. **Do not use for any applications involving direct or indirect food contact and/or drinking water contact.**

Many plastics are considered to be resistant to microbial attack, but there are significant exceptions that merit preventative action by the use of antimicrobial additives. Plasticized PVC, polyurethanes and silicones are particularly susceptible. The biodeterioration of products based on these (and other) types of plastics can be a serious problem for manufacturers. Failure to add the proper amount of anti-microbial 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 SL 10 antimicrobial is effective against the microbes which degrade plastic (and plastic additives) can increase the useful life of plastic articles.

VANQUISH SL 10 antimicrobial additive is effective in most plastics compositions and can be used to preserve plastics such as PVC, polyurethanes, polyolefins and others to produce articles such as; shower curtains, coated fabric (e.g. ski wear, raincoats, tents, etc.), floor coverings, underlay & mats, vinyl wall coverings, tarpaulins and awnings, roofing membranes, synthetic leather (e.g. sneakers and training shoe uppers), swimming pool and ornamental pond liners, conveyor belts, appliance gaskets (e.g. washers, refrigerator, etc.), shoe soles and mid-soles, sealants, caulks, weather stripping, non-food contact adhesives, auto parts (e.g. landau tops, door seals, shock absorbers, etc.), foam (e.g. seat cushions, gaskets, insulation) electrical & pipe wrap, furniture (e.g. outdoor, leisure, water bed liners, cushions).



VANQUISH SL 10 antimicrobial additive has been found to be an effective polymer preservative at concentrations of 0.5% to 8.0% based on the total weight of the substrate. Typical range of concentrations on which trials can be based, are:

<u>Application</u>	<b>%VANQUISH SL 10 Antimicrobial (based on total weight of final product)</b>
Polyvinylchlorides	0.5 to 8.0
Polyurethanes	0.5 to 8.0
Silicones	1.0 to 8.0
Polyolefins	1.0 to 8.0

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, and length of time for which protection is required.

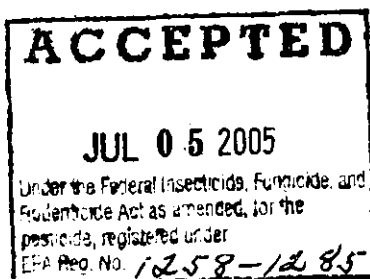
#### **INCORPORATION OF VANQUISH SL 10 ANTIMICROBIAL INTO POLYMERS**

**Polyurethane:** For addition to cross linked polyurethane VANQUISH SL 10 should be added to the polyol mixture at a concentration that will yield the desired use level in the final product after curing with isocyanate. For thermoplastic polyurethane see 'Melt-Processed Polymers' below.

**Melt Processed Polymers:** For addition to melt processed polymers (PVC, thermo-plastic polyurethane, etc.), Vanquish SL10 may be metered into the melt at the injection point in an extrusion system to yield concentrated chips (masterbatch) or the desired end use concentration. Masterbatch chips can be blended with non-preserved chips in the users plant to yield the desired end use concentration upon subsequent melt processing.

**For PVC** VANQUISH SL 10 may also be added to the mixed liquid components which are added to a blend of resin and other solid components, shear mixed until a dry blend is achieved and then processed through extrusion, calendering, molding or other system.

**PVC Plastisols:** Incorporation is very flexible and VANQUISH SL 10 anti-microbial liquid may be added to other liquid components during manufacture or blended into a ready-made plastisol. Use levels should be calculated based upon the total weight of the formulation.



**For silicone sealants**, the VANQUISH SL 10 may be added to the silicone oil before processing, or to the manufacturing vessel before packing off.

**For polyolefin**, VANQUISH SL 10 may be mixed with powdered polymer to yield the desired end use concentration then extruded, followed by fabrication to molding or film, etc. Alternatively, VANQUISH SL 10 may be made into a masterbatch by extrusion, diluted to end-use concentration with more polymer in the extruder, then fabricated as required.

The Arch Chemicals, Inc. can provide guidance on the proper use of Vanquish anti-microbial.

**STORAGE AND DISPOSAL:**

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

**PESTICIDE 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.

For information on spills, call 1-800-654-6911

