**MATERIAL SAFETY DATA SHEET**

**SECTION 1: PRODUCT and COMPANY IDENTIFICATION**

Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204  Issue Date: 06/05/2006
Norwalk, CT 06856-5204  MSDS No.: 150000020211
For MSDS Questions: 1-800-511-MSDS  Rev: W
Emergency telephone: (800) 654-6911  PC:

For a transport accident or leak, fire or major spill, call CHEMICAL EMERGENCY RESPONSE CENTER (800) 424-9300.

Material Name: PROXEL GXL

Read the entire MSDS for a complete hazard assessment.

**SECTION 2: COMPOSITION/INFORMATION on INGREDIENTS***

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>% Conc.</th>
<th>Ingredient Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>025265-71-8</td>
<td>50-60</td>
<td>Dipropylene glycol</td>
</tr>
<tr>
<td>007732-18-5</td>
<td>10-20</td>
<td>Water</td>
</tr>
<tr>
<td>002634-33-5</td>
<td>18.8-19.9</td>
<td>1,2-Benzisothiazolin-3-one</td>
</tr>
<tr>
<td>001310-73-2</td>
<td>5-7</td>
<td>Sodium hydroxide</td>
</tr>
</tbody>
</table>

*Ingredients not precisely identified are either proprietary or nonhazardous. Values are not product specifications. +Percent concentration by weight.

**SECTION 3: HAZARDS IDENTIFICATION***

See Section 8 for exposure guidelines & Section 11 for toxicology and ingredient specific information.

***************************  EMERGENCY OVERVIEW  ***************************

BROWN LIQUID. SLIGHT ODOR.
RESPIRATORY IRRITANT.
EYE CORROSIVE. CORROSIVE TO THE GASTROINTESTINAL TRACT. SKIN CORROSIVE.
SKIN SENSITIZER.

***************************  POTENTIAL HEALTH HAZARDS  ***************************

Eye: This product is probably eye corrosive based on animal studies.

Skin: This product is skin corrosive based on animal studies. This product may induce skin sensitization in humans.
MSDS (continued) PROXEL GXL

Inhalation: Vapors and/or aerosols of this material will probably irritate mucous membranes, eyes, nose, and respiratory passages.

Ingestion: This material will probably cause chemical burns of the mouth, pharynx, esophagus, and stomach in humans, following ingestion of this material. Injury may be severe and cause death. The acute oral toxicity of this material is between 500 and 5000 mg/kg. Relative to other materials, this material is classified as slightly toxic by ingestion.

Other: 1,2-Benzisothiazolin-3-one: The biocide component can induce skin sensitization.

SECTION 4: FIRST AID MEASURES

General First Aid Procedures

Eyes:
Immediately flush the eyes with large quantities of running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used at this time. Continue the flushing for an additional 15 minutes if a physician is not immediately available.

Skin:
Remove contaminated clothing and footwear while under a safety shower. Wash off of skin with plenty of soap and water. Get medical attention. Wash contaminated clothing and decontaminate footwear before reuse.

Ingestion:
DO NOT INDUCE VOMITING. Give one or two glasses of water to drink and refer to medical personnel or take direction from either a physician or a poison control center. Never give anything by mouth to an unconscious person.

Inhalation:
Remove victim to fresh air. If a cough or other respiratory symptoms develop, consult medical personnel.

Note to Physician:
Mucosal injury following ingestion of this potentially corrosive material contraindicates the induction of vomiting.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties
Flash Point: > 200°F, 93°C Method: Seta Flash Closed Tester
Upper Flammability Limit (UFL): No Data
Lower Flammability Limit (LFL): No Data
Autoignition Temperature: No Data
MSDS (continued) **PROXEL GXL**

Products of combustion:
Combustion products: Carbon oxides, nitrogen oxides, sulfur oxides, ammonia.

Extinguishing media:
Water fog, foam, carbon dioxide, dry chemical, halogenated agents.

Fire fighting instructions:
Wear self-contained breathing apparatus with full facepiece and full protective clothing. If contact occurs with material or its solutions, immediately flush with water and remove contaminated clothing.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Spill procedures:**
- Wear skin, eye, and respiratory protection during cleanup.
- Contain spill.
- Soak up material with absorbent and shovel into a chemical waste container.
- Keep out of sewers and drains.
- 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 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.

### SECTION 7: HANDLING and STORAGE

**Handling:**
- Use closed handling and dispensing systems whenever possible. When open handling and dispensing procedures must be used, precautions should be in place to ensure no skin contact will occur. Do not create aerosols.
- Avoid breathing vapors or aerosols.
- Prevent skin and eye contact.
- Observe recommended exposure limits.
- Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product which caused the sensitization.

**Storage:**
- Do not store near feed, food, or within the reach of children.
- Keep container tightly sealed. Store in a cool, well ventilated area away from heat, sources of ignition, direct sunlight, and strong oxidizing agents, acids.
- Corrodes mild steel, aluminum, copper, and other metals.
MSDS (continued) PROXEL GXL

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure guidelines:
No ACGIH TLV or OSHA PEL is assigned to this mixture. Control of exposure to below the PEL for the ingredients may not be sufficient. Minimize exposure in accordance with good hygiene practice.

1,2-Benzisothiazolin-3-one: Arch Chemicals, Inc. Biocides has adopted an Occupational Exposure Limit of 0.1 mg/m$^3$ for 1,2-Benzisothiazolin-3-one.

Sodium hydroxide: The ACGIH STEL for sodium hydroxide is 2 mg/m$^3$, 8-hour TWA, ceiling. The OSHA PEL for sodium hydroxide is 2 mg/m$^3$, 8-hour TWA.

Engineering controls:
Use permitted ventilation adequate to maintain safe levels.

PROTECTIVE EQUIPMENT

Respiratory protection:
If needed, use NIOSH certified full facepiece respirator for mists.

Protective clothing:
Take all precautions to prevent skin contact. Use gloves, arm covers and apron determined to be impervious under the conditions of use. Additional protection, such as full body suit and boots, may be required depending on conditions.
Remove contaminated clothing and wash before rewearing.
Wash separately from other laundry.

Eye protection:
Chemical tight goggles and full faceshield.

Other:
Eyewash station and safety shower in work area.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Brown
Odor: Slight
Odor Threshold: No Data
Boiling Point: 212°F, 100°C
Decomposition Temperature: No Data
Melting Point: No Data
Vapor Pressure (mm Hg at 20°C): 4.35 x 10$^{-7}$ (for 1,2-Benzisothiazolin-3-one)
Vapor Density (air = 1): No Data
Solubility in Water: Soluble
Solubility in Other: No Data
Octanol/Water Partition Coefficient: No Data
pH: 13.90 at 25°C
Specific Gravity: ~ 1.13 @ 25°C/25°C
Bulk Density: No Data
% Volatile by Volume: 12
VOC (%): No Data
Viscosity: 500.0 approx. (cps)
SECTION 10: STABILITY and REACTIVITY

Chemical Stability
Stable under normal conditions.

Conditions to avoid:
Corrodes mild steel, aluminum, copper, and other metals.

Incompatibility:
Strong oxidizing agents, acids.

Hazardous polymerization:
Not known to occur.

Hazardous decomposition products:
Carbon oxides, nitrogen oxides, sulfur oxides, ammonia.

SECTION 11: TOXICOLOGICAL INFORMATION

Contact the addressee in Section 1 for product toxicology information.

Other effects of overexposure:
1,2-Benzisothiazolin-3-one: BIT, the biocidal active ingredient used in this product, has the potential to induce human skin sensitization. However, based collectively on several patch test studies and our experience, formulations which contain no more than 500 ppm BIT are unlikely to induce skin sensitization.

Regulated carcinogen(s):
This product contains no components present at concentrations equal to or greater than 0.1% listed by IARC, OSHA, NTP or ACGIH as a carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:
The biocidal active ingredient, BIT, is toxic to fish (96hr LC50s 5-50 mg/L) and very toxic to algae (72hr EC50 0.37 mg/L).

Environmental fate:
BIT is not likely to bioaccumulate; there is evidence of photodegradation in water and soil.

Other:
BIT is broken down in sewage treatment at concentrations <5 ppm.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal method:
In Canada, observe all applicable Canadian regulations. PROXEL® GXL is toxic to fish and spills must be detoxified by biological or chemical means. Aerobic sewage treatment organisms will metabolize the active ingredient in concentrations of less than 5 ppm (25 ppm PROXEL® GXL). The half-life in an aerobic sewage treatment plant is about 50 minutes. The metabolites are not toxic to fish.
MSDS (continued) PROXEL GXL

Spills of more than 100 kg should be detoxified by the following chemical procedure:
1. Neutralize spill by adding 3 gallons of 10% (wt./wt.) sodium bisulfite solution per pound of spilled material. The 10% solution of sodium bisulfite can be prepared by mixing 1 part of sodium metabisulfite with 9 parts of cold water and stirring for 15 minutes until dissolution is complete. The pH of the sodium bisulfite solution should be adjusted to 6.5 by adding 1M sodium hydroxide. Refer to the manufacturer's MSDS for information on the hazards and proper use of sodium metabisulfite and sodium hydroxide.
2. Test for completion of the reaction by using 10013 Merckoquant Sulfite Test Strips. The reaction is complete when excess bisulfite can be detected. If bisulfite cannot be detected, add 20% of the original volume of the deactivating solution used, wait 20 minutes and repeat the test.

It is recommended that spill cleanup waste be fully evaluated to ensure proper disposal.

Container disposal:
Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from container using appropriate solvents (e.g. triple rinsing). Then offer for recycling/reconditioning or puncture or otherwise destroy empty container before disposal.

SECTION 14: TRANSPORT INFORMATION

This material is regulated by the US DOT.
Proper Shipping Name is: CORROSIVE LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE & 1,2-BENZISOTHIAZOLIN-3-ONE)
UN ID Number is: 1760
Special Provisions: No Data
Hazard Class: 8.0
   Additional Hazard Class: No Data
   Additional Hazard Class: No Data
Hazard Packing Group: 2
Marine Pollutant: Yes

DOT Hazard Information
Explosive: No
Explosive Class: No Data Description: No Data
Skin Corrosive: Yes
Metal Corrosive: Yes
Poisonous: No

Air (IATA): UN1760, CORROSIVE LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE & 1,2-BENZISOTHIAZOLIN-3-ONE), 8, II, Marine Pollutant

Water (IMDG): UN1760, CORROSIVE LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE & 1,2-BENZISOTHIAZOLIN-3-ONE), 8, II, Marine Pollutant

SECTION 15: REGULATORY INFORMATION

TSCA (Toxic Substances Control Act):
This product is a FIFRA-regulated pesticide and is exempt from TSCA regulation. Do not use for other purposes.

SARA Title III (Emergency Planning and Community Right-To-Know Act):
313 Reportable ingredients:
This product does not contain any chemicals subject to the reporting requirements of SARA Section 313.
MSDS (continued) **PROXEL GXL**

Canadian Regulations:
CEPA (Canadian Environmental Protection Act): All ingredients are on the DSL (Domestic Substances List).

WHMIS Classifications:

PRODUCT USE: MICROBIOSTAT SOLUTION - INDUSTRIAL PRODUCT

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Class E -- Corrosive material (CPR62).
Class D, Division 2B, Toxic.

**SECTION 16: OTHER INFORMATION**

We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.*

<table>
<thead>
<tr>
<th>NFPA Rating:</th>
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<tbody>
<tr>
<td>Health: 3</td>
</tr>
<tr>
<td>Fire: 1</td>
</tr>
<tr>
<td>Reactivity: 0</td>
</tr>
<tr>
<td>Special: No Data</td>
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<tr>
<th>HMIS Rating:</th>
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<tr>
<td>Reactivity: 0</td>
</tr>
<tr>
<td><strong>Personal Protection: No Data</strong></td>
</tr>
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</table>

*This information is intended solely for the use of individuals trained in the particular hazard rating system.

**See appropriate MSDS section.

Revision status:
Revision date: 6/05/2006
Supersedes: 4/12/2005
Sections Revised: 14

The information herein is given in good faith but no warranty, expressed or implied, is made.

Prepared by: EL
Approved by: TLW/MB
Approval date: 07/03/01

THE PRODUCT NAMES LISTED ARE TRADEMARKS OF ARCH CHEMICALS, INC. OR ITS AFFILIATED COMPANIES.

The information herein is given in good faith but no warranty, expressed or implied, is made.

This MSDS was prepared by the Safety, Health and Environment Group of at 501 Merritt, Norwalk, CT 06856. For further questions, call during regular business hours at 1-800-511-MSDS.