

**MATERIAL SAFETY DATA SHEET**

MSDS

**Belclene® 200**

**Date-Issued:** 11/09/2004  
**MSDS Ref. No:** BWA79000  
**Date-Revised:** 12/08/2004  
**Revision No:** 1

**1. PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** Belclene® 200  
**GENERAL USE:** Scale/deposit control additive

**MANUFACTURER**

Bio-Lab, Inc.  
 BioLab Water Additives Division  
 P.O. Box 300002  
 Lawrenceville, GA 30049-1002  
**Customer SERVICE:** (800) 600-4523

**24 HR. EMERGENCY TELEPHONE NUMBERS**

**Poison Control Center (Medical) :** (877) 800 - 5553  
**CANUTEC (Canadian Transportation) :** (613) 996 - 6666  
**CHEMTREC (US Transportation) :** (800) 424 - 9300

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Chemical Name</u>	<u>CAS#</u>	<u>Wt.%</u>
Polymaleic Acid	26099-09-2	45 - 55
Maleic Acid	110-16-7	1 - 5
Water	7732-18-5	30 - 60

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW**

**PHYSICAL APPEARANCE:** Amber liquid with slight odor.

**IMMEDIATE CONCERNS:** DANGER: Corrosive: Causes eye burns and may cause irreversible damage. Causes skin and respiratory tract irritation. Do not get in eyes, on skin or clothing. Wear goggles or safety glasses and rubber gloves when handling this product. Avoid breathing vapors. Remove and wash contaminated clothing before reuse.

**POTENTIAL HEALTH EFFECTS**

**EYES:** Causes eye burns. Do not get in eyes.

**SKIN:** Causes skin irritation. Avoid contact with skin.

**INGESTION:** No adverse health effects anticipated from ingestion of incidental amounts of product.

**INHALATION:** Irritating to respiratory tract. Avoid breathing mist and vapor.

**CHRONIC:** There are no known chronic hazards.

**ROUTES OF ENTRY:** Skin Contact, Inhalation, Ingestion, Eye Contact.

**4. FIRST AID MEASURES**

**EYES:** If in eyes: Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Seek medical attention.

**SKIN:** If on skin or clothing: Remove contaminated clothing and thoroughly wash with soap and water. Get medical attention if irritation develops and persists.

**INGESTION:** If swallowed: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

**INHALATION:** 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 poison control center or doctor for treatment advice.

**NOTES TO PHYSICIAN:** This product is corrosive to eyes. Product may be irritating to skin and mucous membranes, and has low oral toxicity. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Observation may be warranted. Treatment is controlled removal of exposure with symptomatic and supportive care.

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## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** Not Applicable (aqueous solution)

**GENERAL HAZARD:** There are no unusual fire and explosion hazards known.

**EXTINGUISHING MEDIA:** Appropriate to surrounding materials.

**HAZARDOUS COMBUSTION PRODUCTS:** In fire conditions, decomposition products may include, but are not limited to, carbon monoxide and carbon dioxide.

**EXPLOSION HAZARDS:** Not considered to be an explosion hazard.

**FIRE FIGHTING PROCEDURES:** Flood with copious amounts of water.

**FIRE FIGHTING EQUIPMENT:** Firefighters should wear full protective clothing and self contained breathing apparatus (SCBA). Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

**SENSITIVE TO STATIC DISCHARGE:** Not Sensitive

**SENSITIVITY TO IMPACT:** Not Sensitive

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition may produce carbon dioxide, carbon monoxide or other toxic gases.

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## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES: STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Utilizing appropriate clothing and safety equipment, contain spill material. Cover the liquid with an inert absorbent. Using clean, dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry plastic containers for disposal. Dispose of according to local, municipal, state, provincial, and federal regulations.

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## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Avoid contact with eyes, skin or clothing. Avoid breathing vapors.

**HANDLING:** Use safe chemical handling procedures for the hazards presented by this material. Do not mix with other chemicals.

**STORAGE:** Store at room temperature in a dry, well ventilated area. Keep container closed when not in use. Protect containers from physical damage. Keep out of reach of children.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE GUIDELINES:**

**OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)**

	TWA	<u>EXPOSURE LIMITS</u>					
		<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>SUPPLIER OEL</u>	
		<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
Polymaleic Acid	[1]						
Maleic Acid							

**OSHA TABLE COMMENTS:**

1. N/E = Not Established

**ENGINEERING CONTROLS:** General room ventilation plus local exhaust should be used to maintain exposure below TLV.

**PERSONAL PROTECTIVE EQUIPMENT:**

**EYES AND FACE:** Wear goggles or safety glasses with side shields when handling this product.

**SKIN:** Wear rubber gloves when handling this product. Avoid contact with skin.

**RESPIRATORY:** Avoid inhaling vapors or mist. In case of insufficient ventilation, wear an approved NIOSH respirator.

**PROTECTIVE CLOTHING:** Wear impervious apron and gauntlets when splashing is expected during liquid transfers. Wear normal workshoes except in conditions of spills where rubber overshoes or boots would be required. Remove and wash contaminated clothing before reuse.

**WORK HYGIENIC PRACTICES:** Wash hands thoroughly with soap and water after handling.

**OTHER USE PRECAUTIONS:** Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid

**ODOR:** Slight

**COLOR:** Amber

**pH:** <2

**PERCENT VOLATILE:** Not Available

**VAPOR PRESSURE:** 24 mmHg @ 20C (water)

**VAPOR DENSITY:** 0.020 (Air=1)

**BOILING POINT:** 100°C to 101°C

**FREEZING POINT:** -5°C to -10°C

**MELTING POINT:** Not Applicable

**SOLUBILITY IN WATER:** Miscible @ 25C (% by wt)

**SPECIFIC GRAVITY:** 1.17 (water=1)

**COEFF. OIL/WATER:** 0.73

**ODOR THRESHOLD:** Not Established

**OXIDIZING PROPERTIES:** Not Applicable

**10. STABILITY AND REACTIVITY**

**CONDITIONS TO AVOID:** None known.

**STABILITY:** This product is stable under normal conditions.

**POLYMERIZATION:** Hazardous polymerization will not occur under normal conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon dioxide, carbon monoxide.

**INCOMPATIBLE MATERIALS:** Strong alkali materials. Acid reactive salts such as nitrites and sulfites, oxidizing agents.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE**

**EYES:** Toxicological studies indicate this product to be severely irritating to eyes.

**DERMAL LD<sub>50</sub>:** No data available for this product.

**ORAL LD<sub>50</sub>:** 15000 mg/kg of body weight in rats (neutralized) (similar product)

**INHALATION LC<sub>50</sub>:** No data available for this product

**ACUTE EFFECTS FROM OVEREXPOSURE:** Product will cause severe irritation of the mucus membranes and skin. Eye damage may include conjunctivitis, swelling and fluid discharge, permanent corneal damage and blindness. Skin and mucous membrane irritation may include severe swelling, redness and scar formation. Overexposure to mists or vapors will cause difficulty in breathing due to irritation and fluid in the lungs, which can result in severe tissue damage or even death.

**EYE EFFECTS:** This product is expected to be a severe eye irritant based on available toxicological information.

**SKIN EFFECTS:** This product is moderately irritating to skin.

**SENSITIZATION:** This product is not expected to be a skin sensitizer.

**CHRONIC / SUBCHRONIC:**

No significant adverse chronic or subchronic health effects expected. Results from subchronic studies in laboratory animals did not produce any adverse effects.

**CARCINOGENICITY:**

The components of this product are not listed as a carcinogen by IARC.

The components of this product are not listed as a carcinogen by NTP.

The components of this product are not listed as a carcinogen by OSHA.

**MUTAGENICITY:** Mutagenicity studies were negative.

**REPRODUCTIVE EFFECTS:** This product is not expected to have any effect on fertility or reproduction.

**TERATOGENIC EFFECTS:** This product is not expected to be teratogenic.

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**12. ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL INFORMATION:** This product is expected to have low toxicity to fish (LC<sub>50</sub> > 100 ppm), and aquatic invertebrates (LC<sub>50</sub> > 580 ppm). Suggested ambient pH values for domestic water supplies range between 5.0 - 9.0, for freshwater aquatic life between 6.5 - 9.0, and for marine life between 6.5 - 8.5 (but not more that 0.2 units outside the normally occurring range.)

**CHEMICAL FATE INFORMATION:** This product is not expected to bioaccumulate in fish or plants. It may accumulate in activated sludge, and to a lesser degree algae. It is not expected to significantly undergo biodegradation but may undergo photolysis. This product may cause a decrease in the pH values for domestic water supplies.

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**13. DISPOSAL CONSIDERATIONS**

**PRODUCT DISPOSAL:** Open dumping or burning of this material is prohibited.; An acceptable method of disposal is to burn in an incinerator in accordance with all local, municipal, state, provincial, or federal regulations. The appropriate regulatory agencies should be contacted prior to disposal.

If product was supplied in a single use container, care should be taken to dispose of the container in a responsible manner in accordance with applicable regulations. Label precautions should be followed for any residual material in container.

Whenever possible, our company encourages recycling of containers.

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**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Corrosive Liquid, Acidic, Organic, N.O.S. (contains Polymaleic acid)

**PRIMARY HAZARD CLASS/DIVISION:** 8 (Corrosive)

**UN/NA NUMBER:** UN3265

**PACKING GROUP:** III

**PLACARDS:** Corrosive

**LABEL:** Corrosive

**OTHER SHIPPING INFORMATION:** DOT Marking: Corrosive liquid, acidic, organic, N.O.S. (contains polymaleic acid) UN3265  
Hazardous Substance/RQ: Not applicable **49 STCC Number: No rail shipments of this product.**

#### CANADA TRANSPORT OF DANGEROUS GOODS

**PROPER SHIPPING NAME:** Corrosive Liquid, Acidic, Organic, N.O.S. (contains Polymaleic acid)

**PRIMARY HAZARD CLASS/DIVISION:** 8 (Corrosive)

**UN/NA NUMBER:** UN3265

**PACKING GROUP:** III

#### AIR (ICAO/IATA)

**PROPER SHIPPING NAME:** Corrosive Liquid, Acidic, Organic, N.O.S. (contains Polymaleic acid)

#### INTERNATIONAL

**PROPER SHIPPING NAME:** Corrosive Liquid, Acidic, Organic, N.O.S. (contains Polymaleic acid)

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## 15. REGULATORY INFORMATION

### UNITED STATES

#### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

##### 311/312 HAZARD CATEGORIES:

**FIRE:** NO **PRESSURE GENERATING:** NO **REACTIVITY:** NO **ACUTE:** YES **CHRONIC:** NO

**313 REPORTABLE INGREDIENTS:** This product or its components are not listed.

##### 302/304 EMERGENCY PLANNING

**EMERGENCY PLAN:** This product or its components are not listed.

#### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** Maleic acid (CAS # 110-16-7), a component of this product, has a CERCLA RQ of 5,000 lbs.

#### TSCA (TOXIC SUBSTANCE CONTROL ACT)

**TSCA REGULATORY:** TSCA (Toxic Substances Control Act): This product or its components are listed on the TSCA Inventory. This product or its components are not subject to export notification.

**OSHA HAZARD COMM. RULE:** Product is hazardous by definition of the Hazardous Communication Standard.

**CLEAN WATER ACT:** This product contains maleic acid, which is listed as a Clean Water Act Section 311 Hazardous Substance and has an RQ of 5,000 lbs.

**FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):** This product is not a US EPA registered pesticide.

#### CLEAN AIR ACT

**40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION:** This product maleic acid, which is listed on the Clean Air Act Section 111 Volatile Organic Compounds list.

### CANADA

**WHMIS CLASS:** E - Corrosive Material; D2B - Skin and respiratory irritant.

**CANADA INGREDIENT DISCLOSURE LIST:** Maleic acid (CAS# 110-16-4) is listed on Canadian Ingredient Disclosure List.

**DOMESTIC SUBSTANCE LIST (INVENTORY):** Product intended active ingredients are listed on DSL.

**CALIFORNIA PROPOSITION 65:** This product does not contain any substance(s) which are defined by the state of California to cause cancer, birth defects, or other reproductive effects.

**COMMENTS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this MSDS

contains all the information required by the Controlled Products Regulations.

## 16. OTHER INFORMATION

**PREPARED BY:** Regulatory Affairs Department

**REVISION SUMMARY** Revision #: 1 This MSDS replaces the November 22, 2004 MSDS. Any changes in information are as follows: In Section 14 Other DOT Shipping Information

### HMIS RATING

<b>HEALTH:</b>		3
<b>FLAMMABILITY:</b>		0
<b>PHYSICAL HAZARD:</b>		0
<b>PERSONAL PROTECTION:</b>		J

### NFPA RATING

<b>HEALTH:</b>	3
<b>FIRE:</b>	0
<b>REACTIVITY:</b>	0

**Key**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

**HMIS RATINGS NOTES:** Protection=J (Safety goggles or glasses, gloves, apron & combination dust & vapor respirator).

**COMMENTS:** The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard, National Fire Protection Association (NFPA), Hazardous Materials Identification System (HMIS), and Canada's Workplace Hazardous Information System (WHMIS) and Environmental Protection Agency (CEPA).

**MANUFACTURER DISCLAIMER: IMPORTANT:** The information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.