



*your partner in food safety*

# SDS

## Safety Data Sheet

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### 1) Product Identification

**Product Name:** Birkoside MP-2

**Product Code:** I02488

**Recommended Use:** Effective antimicrobial for many applications.

**Producer:** Birko Corporation  
9152 Yosemite Street  
Henderson, CO 80640-8027

**Contact Information:** (303) 289-1090 or 1-800-525-0476

**Emergency Number:** CHEMTREC 1-800-424-9300

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### 2) Hazard(s) Identification

Health	Environmental	Physical
Acute Toxicity Cat. 4 (oral) Cat. 4 (dermal) Cat. 1 (vapor) Skin Corrosion Cat. 1A Eye Effects Cat. 1	Aquatic Toxicity Acute Cat. 3	Corrosive Cat. 1 Oxidizing Liquid Cat. 1

**Labeling:****Symbol:****Signal Word: Danger****Organic Peroxide, Oxidizer, Corrosive, Irritant, Aquatic Toxicity****Hazard Statement(s):** Causes irreversible eye damage. Harmful or fatal if swallowed. Causes burns. Do not get into eyes, on skin, or on clothing. Do not use around open flames or sparks. Avoid contact with organic materials ie., oily rags, wood, clothing. May spontaneously combust.**Precautionary Statement(s):** Use rubber gloves, protective splash-proof goggles, and protective clothing. Remove contaminated clothing and wash before re-use. Do not contaminate food, feed, or water. Keep container closed when not in use.

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**3) Composition/ Information on Ingredients**

Name(s)	Synonym(s)	CAS Number	Weight %
Acetic Acid		64-19-7	30-40%
Peroxyacetic Acid		79-21-0	14.5-15.3%
Hydrogen Peroxide	Dioxidane	7722-84-1	4.5-5.5%

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**4) First-Aid Measures**

Inhalation	Skin Contact	Eye Contact	Ingestion
Possible discomfort: severe irritation of mucous lining (nose, throat, eyes), cough, sneezing, flow of tears. Move victims into fresh air. If breathing difficulties occur (e.g. severe continual coughing): keep patient half sitting with upper body raised. Keep patient warm and at rest. Consult a physician immediately.	After contact with skin, wash immediately with plenty of water. Take off all contaminated clothing immediately. Consult a physician. Immediately rinse contaminated or saturated clothing with water.	With eye held open, thoroughly rinse immediately with plenty of water for a least 10 minutes. Continue rinsing process with eye rinsing solution. Protect unharmed eye. Call ambulance. (Cue: caustic burn of the eyes) Immediate further treatment in ophthalmic hospital/ ophthalmologist. Continue rinsing eye until arrival at ophthalmic hospital.	Do not induce vomiting. Danger of penetration of the lungs (danger to breathing) when swallowed or vomited, due to gas evolution and foam formation. Only when patient fully conscious: have the mouth rinsed with water. Have patient drink plenty of water in small sips. Keep patient warm and at rest. Notify ambulance immediately.

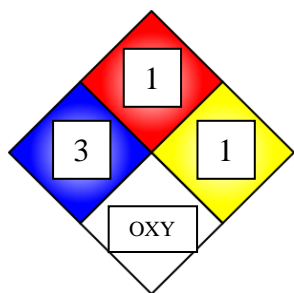
## 5) Firefighting Measures

**Suitable Extinguishing Media:** Water, Carbon Dioxide, and Foam Blanket

**Unsuitable Extinguishing Media:** Dry Chemical

**Specific Hazards:** Always wear self-contained breathing apparatus when fighting a chemical fire.

**Special Protective Actions for Fire-Fighters:** Oxygen released on contact with moisture. This product will support, or accelerate, or even initiate the combustion process, when in concentrated contact with combustible material.



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## 6) Accidental Release Measures

**Personal Precautions:** Be sure to use all necessary Personal Protective Equipment. Evacuate all unprotected personal to safe area.

**Environmental Precautions:** Avoid contamination of food, feed, sewers, waterway, or groundwater.

**Methods and Materials for Containment and Clean-Up:** Absorb with liquid-binding material, e.g.: diatomaceous earth or universal binder. Small Spills: Recommended cleaning agent: water. Clean contaminated surface thoroughly. Pick up mechanically. Collect in suitable containers. Keep away from incompatible substances. Keep away from flammable substances. Large Spills: Recommended cleaning agent: water. Clean contaminated surface thoroughly. Pick up mechanically. Collect in suitable containers. Keep away from incompatible substances. Keep away from flammable substances. Dispose of absorbed material in accordance with regulations.

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## 7) Handling and Storage

**Precautions for Safe Handling:** Do not contaminate food, feed, or natural water. Supplier is not responsible for disposition of this product. Do not reuse container. Maintain an eyewash station, and safety shower in product handling areas.

**Conditions for Safe Storage:** Keep container closed when not in use. Store in a cool, dry, and well-ventilated location. Keep away from heat and incompatible materials. Keep away from organic material.



## 8) Exposure Controls and Personal Protection

**Appropriate Engineering Controls:** Ventilation: Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

### Exposure Limits:

Name (CAS-No.)	PEL	TWA	Ceiling	STEL
Acetic Acid (64-19-7)	10 ppm	N/A	N/A	15 ppm
Peroxyacetic Acid	N/A	N/A	N/A	N/A
Hydrogen Peroxide (7722-84-1)	1.4 mg/m3 OSHA	1.4 mg/m3 OSHA 1 ppm ACGIH	N/A	N/A

### Personal Protective Equipment

Eye/Face	Skin	Gloves	Boots
 			

**Eye/Face:** Safety glasses with Side shields. Wear chemical safety goggles with face shield when appropriate.

**Skin:** Wear chemical resistant clothing and rubber boots.

**Gloves:** Wear appropriate chemical resistant gloves.

**Respiratory:** Use only when concentrations exceed exposure limits. If limits are exceeded a NIOSH approved respirator is required. If eye irritation occurs use a full face style mask. When vapor concentrations are above 1 ppm or in a spill emergency a NIOSH approved self-contained breathing apparatus or airline respirator, with full-face piece is required. If

respirators are warranted in the workplace a respiratory protection programs must meet 29 CFR 1910.134, and be followed.

**Protective Material Types:** Butyl rubber, natural rubber, neoprene, nitrile, polyvinyl chloride (PVC), Gore Tex, or Tyvek (R)

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## 9) Physical and Chemical Properties

**Physical Form:** Liquid

**Appearance:** colorless, clear

**Odor:** Sharp, pungent

**pH:** (1% Solution) 2.8

**Melting Point:** Not available

**Freezing Point:** -56°F

**Boiling Point:** 226° F

**Flash Point:** > 180 F (closed cup)

**Evaporation Rate:** > 1

**Flammability:** Not flammable

**Upper/Lower Flammability or explosive limits:** Not applicable

**Vapor Pressure:** 22mm@25°C

**Vapor Density:** > 1

**Relative Density:** Not available

**Specific Gravity:** 1.15

**Solubility:** 100%

**Partition coefficient:** Not available

**Auto-Ignition Temperature:** Not applicable

**Decomposition Temperature:** Not available

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## 10) Stability and Reactivity

**Chemical Stability:** Oxidizing agent. Stable under normal storage conditions.

**Possibility of Hazardous Reactions:** Danger of decomposition if exposed to heat, other products, impurities, catalysts, metallic salts, or alkalis.

**Conditions to Avoid:** Sun rays, heat, and heat effect.

**Materials to Avoid:** Impurities, decomposition catalysts, metals, metallic salts, alkalis, hydrochloric acid, reducing agents, flammable substances, and organic solvents.

**Hazardous Decomposition Products:** Oxygen released on contact with moisture. This product will support, or accelerate, or even initiate the combustion process, when in concentrated contact with combustible material.

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## 11) Toxicological Information

### Acute Toxicity:

Test	Results	Basis
Oral LD50 (Rat)	801 mg/kg	Product test data
Dermal LD50 (Rabbit)	6500 gm/kg	Product test data
Inhalation LC50 (Rat)	>0.17 mg/l	Product test data

**Summary Comments:** Effect on skin: Causes burns. With increasing contact length, local erythema or extreme irritation (whitening) up to blistering can occur. Effects on eyes: Extreme irritation up to cauterization. Can cause severe conjunctivitis cornea damage or irreversible eye damage. Symptoms may occur with delay. Effect when swallowed: Swallowing can lead to bleeding of the mucosa in the mouth, esophagus and stomach. The rapid releasing of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the internal organs, especially in the event of greater intake of the product. Effect when inhaled: Inhalation of vapor/aerosols can lead to irritation of the respiratory tract and cause inflammation of the respiratory tract and pulmonary oedema. Symptoms may occur with delay.

### Sub-chronic/Chronic Toxicity:

Test	Results	Comments
N/A	N/A	N/A

**Summary Comments:** None

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## 12) Ecological Information

### Toxicity:

Test	Results
Daphnia Magna EC50	24 hours 7.7 mg/l at 100%
Daphna pulex EC50	48 hours 2.4 mg/l at 100%
Lctalurus punctatus LC50	96 hours 37.4 mg/l at 100%
Pimephales promelas LC50	96 hours 16.4 mg/l at 100%

Oncorhynchus mykiss LC50	24 hours 31.3 mg/l 100%
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**Persistence and Degradability:** Photochemical degradation (air) takes place. Under ambient conditions quick hydrolysis, reduction or decomposition occurs.

**Bioaccumulative Potential:** This material is believed not to bioaccumulate.

**Mobility in Soil:** Readily biodegradable. The following substances are formed: oxygen and water

**Other Adverse Effects:** Not established

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### 13) Disposal Considerations

**Disposal Method:** Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002

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### 14) Transport Information

**UN Number:** UN 3109

**UN Proper Shipping Name:** Organic Peroxide, Type F, Liquid, ( $\leq 17\%$  Peracetic Acid with  $\leq 26\%$  Hydrogen Peroxide)

**Transport Hazard Class (es):** 5.2, 8

**Packing Group:** II

**Environmental Hazard(s):** N/A

**Special Precautions for User:** Extreme oxidizing product. Handle with extreme care.

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### 15) Regulatory Information

#### US Regulations:

**CERCLA Sections 102a/103 Hazardous substances (40 CFR 302.4):**

Acetic Acid 5000 lbs.

**Section 302 (EHS) TPQ:** Peroxyacetic Acid 500 lbs.

**Section 304 (EHS) RQ:** Peroxyacetic Acid 500 lbs.

**Section 313:** Peroxyacetic Acid

Not regulated

**SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21):**

Acute: Yes

Chronic: No

Fire: No

Reactive: Yes

Sudden Release: No

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### State Regulations:

**California Proposition 65:** This product is not listed

#### **California Hazardous Substance List:**

Acetic Acid 64-19-7

#### **New Jersey Hazardous Substance List:**

Acetic Acid 64-19-7

Peroxyacetic Acid 79-21-0

#### **Pennsylvania Hazardous Substance List:**

Acetic Acid 64-19-7

### Canadian Regulations:

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

**WHMIS Classification:** D2, E, C

**National Inventory Status: U.S. Inventory (TSCA):** All the components of this substance are listed on or exempt from the inventory.

**Canada Inventory (DSL/NDSL):** All components of this product are listed on the DSL

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## 16) Other Information

### HMIS

2	<b>FLAMMABILITY</b>
2	<b>HEALTH</b>
3	<b>REACTIVITY</b>
H	<b>Personal Protection</b>

Hazard Index

4-Severe

3-Serious

2-Moderate









































1-Slight

0-Minimal

**Preparer:** Ramsey Johnson

**Approved By:** Terry L. McAninch

#### Personal Protective Index

A		E	  	I	  					
B	 	F	   	J	  					
C	  	G	  	K	  					
D	  	H	   	X	Ask your supervisor					
Safety Glasses	Face Shield	Splash Goggles	Airline Hood or Mask	Gloves	Synthetic Apron	Dust Respirator	Vapor Respirator	Dust + Vapor Respirator	Full Suit	Boots
										



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