

**MATERIAL SAFETY
DATA SHEET**

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL: 1-800-654-6911 (OUTSIDE
USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®: 1-800-424-9300 (OUTSIDE
USA: 1-703-527-3887)
FOR ALL MSDS QUESTIONS & REQUESTS, CALL: 1-800-511-MSDS (OUTSIDE
USA: 1-423-780-2347)

PRODUCT NAME: **SODIUM OMADINE® 10% "SUMPSIDE"**
INDUSTRIAL MICROBIOSTAT
EPA Registration Number: 1258-1213

1. PRODUCT AND COMPANY IDENTIFICATION

Arch Chemicals, Inc.
501 Merritt 7 PO Box 5204
Norwalk, CT 06856-5204

REVISION DATE: 04/19/2010
SUPERCEDES: 01/21/2009

MSDS Number: 100000000152
SYNONYMS: Sodium pyrethrin; 2-pyridinethiol-1-oxide, sodium salt; 1-hydroxy-2 (1H) - pyridinethione, sodium salt
CHEMICAL FAMILY: (Active ingredient)
DESCRIPTION / USE: Industrial biocide
FORMULA: C₅H₄NOSNa (active ingredient)

2. HAZARDS IDENTIFICATION

OSHA Hazard
Classification:

Mild skin irritant, Mild eye irritant

Routes of Entry: Inhalation, skin, eyes, ingestion
Chemical Interactions: No known interactions
Medical Conditions Aggravated: Diseases of muscle and nerve

Human Threshold Response Data

Odor Threshold Not established for product.

Irritation Threshold Not established for product.

Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	1	0	0	
NFPA	1	0	0	

Immediate (Acute) Health Effects

Inhalation Toxicity:	Not expected to cause significant toxicity unless there is prolonged exposure to high concentrations. High concentrations may be slightly irritating to the eyes, nose, throat, and lungs.
Skin Toxicity:	Skin contact may cause minor irritation consisting of transient redness and/or swelling. This irritant effect would not be expected to result in permanent damage. Not expected to be toxic from dermal contact.
Eye Toxicity:	Contact may cause mild irritation consisting of transient redness, swelling, and mucous membrane discharge to the conjunctiva. No corneal involvement or visual impairment is expected. Exposure to the human eye has been reported to produce a noticeable stinging response that is relieved upon rinsing the eyes. Reversible irritation with no impairment of vision nor adverse health effects have been reported following exposure.
Ingestion Toxicity:	Slightly toxic if swallowed. If small quantities are ingested, vomiting will normally occur (usually within 5-10 minutes). This product is an emetic and due to this property, it is unlikely that significant quantities of material would be absorbed across the gastrointestinal tract to produce serious toxic effects. However, ingestion may produce gastrointestinal irritation with nausea, vomiting, lethargy and diarrhea.
Acute Target Organ Toxicity:	May cause mild skin and eye irritation. Inhalation of mist/vapors may cause mild mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.

Prolonged (Chronic) Health Effects

Carcinogenicity:	This material did not cause cancer in long-term animal studies.
Reproductive and Developmental Toxicity:	This product is not considered to be a reproductive or developmental hazard. However, this material when tested in laboratory animals at maternally toxic doses only was found to cause developmental and/or reproductive toxicity.
Inhalation:	There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.
Skin Contact:	There are no known or reported effects from chronic exposure except for effects (if any) similar to those experienced from acute exposure.
Skin Absorption:	Rodents have been observed to experience muscle weakness from prolonged oral and skin exposures. When tested in Monkeys, no such findings occurred.
Ingestion:	The production of vomiting would provide protection against systemic toxicity. Chronic toxicity via this route is highly unlikely.
Sensitization:	This material tested negative for skin sensitization in humans and laboratory animals.

Chronic Target Organ Toxicity: There are no known or reported effects to humans from repeated exposure to this product.
 Supplemental Health Hazard Information : No additional health information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>		<u>% RANGE</u>
Sodium Pyrithione	3811-73-2	>=	5 - 15
SODIUM CHLORIDE	7647-14-5	>=	0.5 - 1.5
Water	7732-18-5	>=	85 - 95

4. FIRST AID MEASURES

General Advice: Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

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 a poison control center or doctor for further treatment advice.

Skin Contact: 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.

Eye Contact: 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.

Ingestion: 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. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	None
Autoignition Temperature:	No data.
Fire / Explosion Hazards:	This material is not expected to burn unless all the water is boiled away. The remaining compounds may be ignitable.
Extinguishing Media:	Not Applicable. - Choose extinguishing media suitable for surrounding materials.
Fire Fighting Instructions:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water to cool containers.
Hazardous Combustion Products:	Carbon monoxide, Carbon dioxide, Oxides of nitrogen, Oxides of sulfur
Upper Flammable / Explosive Limit, % in air:	Not Applicable/Mixture
Lower Flammable / Explosive Limit, % in air:	Not Applicable/Mixture

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.
<u>Spill Mitigation Procedures</u>	
Air Release:	Vapors may be suppressed by the use of water fog. Contain all liquid for treatment or neutralization.
Water Release:	This material is heavier than water. This material is moderately soluble in water. Notify all downstream users of possible contamination. Stop water flow or divert water flow around spill if possible and safe to do so. Continue to handle as described in land spill.
Land Release:	Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Place spill cleanup materials in proper container/s for proper disposal and decontaminate the entire spill area.
Additional Spill Information :	Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

7. HANDLING AND STORAGE

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

Storage: Store in a cool, dry place. Isolate from incompatible materials. Do not expose to direct light.

Shelf Life Limitations: 2 years minimum if stored in the original unopened container and stored in a cool dry place.

Incompatible Materials for Storage: Strong oxidizing agents concentrated acids

Do Not Store At temperatures Above: 54 DEG°C / 129 DEG°F

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Protective Equipment for Routine Use of Product

Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.

Respirator Type : A NIOSH approved air purifying respirator with organic vapor cartridge and P100 filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin Protection : Wear impervious gloves to avoid skin contact.

Eye Protection: Use chemical goggles. Emergency eyewash should be provided in the immediate work area.

Protective Clothing Type: Impervious

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
Sodium Pyrithione	3811-73-2	ARCH-ROEG*	0.35 mg/m3 TWA

*ARCH-ROEG: Arch Recommended Occupational Exposure Guideline.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	liquid
Color:	pale amber
Odor:	mild, Pyridine
Molecular Weight:	149.2
Specific Gravity :	1.06
pH :	8.5 - 10.5 (@ 25 Deg. C)

Boiling Point:	102 DEG°C / 215 DEG°F
Freezing Point:	-10 DEG°C - -5 DEG°C / 14 DEG°F - 23 DEG°F
Melting Point:	Not applicable
Density:	8.82lb/gal (@ 25 Deg. C)
Vapor Pressure:	19 mmHg (@ 25 Deg. C)
Vapor Density:	No data
Viscosity:	No data
Fat Solubility:	No data
Solubility in Water:	54.7 % (Active ingredient) No data
Partition coefficient n- octanol/water:	0.00015
Evaporation Rate:	0.8 (water = 1)
Oxidizing:	No data
Volatiles, % by vol.:	85 - 95%
VOC Content	Not applicable
HAP Content	Not applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Decomposes slowly. This product may become unstable at elevated temperatures after the removal of water. Not sensitive to static discharge. Not sensitive to mechanical shock. Product will not undergo hazardous polymerization.
Conditions to Avoid:	High temperatures, Evaporation of the product
Chemical Incompatibility:	Strong oxidizing agents, concentrated acids
Hazardous Decomposition Products:	Sodium oxide, Carbon dioxide, Oxides of sulfur, carbon monoxide, Oxides of nitrogen
Decomposition Temperature:	No data

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

Sodium Pyrithione	LD50 = 750 mg/kg	Rat
SODIUM CHLORIDE	LD50 = 3,000 mg/kg	Rat

Dermal LD50 value:

Sodium Pyrithione	LD50 = 700 mg/kg	Rabbit
SODIUM CHLORIDE	LD50 > 10,000 mg/kg	Rabbit

Inhalation LC50 value:

Sodium Pyrithione	Inhalation LC50 4 h = 1.1 MG/L	Rat
SODIUM CHLORIDE	Inhalation LC50 1 h > 42 MG/L	Rat

Product Animal Toxicity

<u>Oral LD50 value:</u>	LD50 Believed to be 4 - 5 g/kg. rat
<u>Dermal LD50 value:</u>	LD50 Believed to be > 2,000 mg/kg rabbit
<u>Inhalation LC50 value:</u>	LC50 4 h (aerosol), (Whole-body) Believed to be > 7.5 MG/L rat LC50 1 h (aerosol), (Whole-body) Believed to be > 30 MG/L rat
Skin Irritation:	Primary irritation index, Rabbit: 1.08 / 8.0 This material is expected to be slightly irritating.
Eye Irritation:	Draize score Rabbit = 17 /110. This material caused systemic toxicity and death when administered to the eyes of rabbits. These effects were not seen when this product was administered to the eyes of monkeys. No adverse health effects are expected following eye contact in humans. This material is expected to be slightly irritating.
Skin Sensitization:	Negative skin sensitizer, guinea pig - Magnusson-Kligman method., This material tested negative for skin sensitization in humans.
Acute Toxicity:	May cause mild skin and eye irritation. Inhalation of mist/vapors may cause mild mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.
Subchronic / Chronic Toxicity:	Skeletal muscle atrophy has been observed from oral and dermal exposure in rats to pyrethione compounds. Exposure to monkeys at several times the dose given to rats gave no indication of either muscle or nerve damage. Although these effects are possible with human exposure, the evaluation of the animals toxicological data makes the above effects unlikely from industrial product use.
Reproductive and Developmental Toxicity:	This product is not considered to be a reproductive or developmental hazard. However, this material when tested in laboratory animals at maternally toxic doses only was found to cause developmental and/or reproductive toxicity.
Sodium Pyrethione	This chemical is not considered to be a reproductive or developmental hazard. However, this material when tested in laboratory animals at maternally toxic doses only was found to cause developmental and/or reproductive toxicity.
Mutagenicity:	This product has been shown to be non-mutagenic based on a battery of assays.
Sodium Pyrethione	This product has been shown to be non-mutagenic based on a battery of assays.
Carcinogenicity:	This material did not cause cancer in long-term animal studies.
Sodium Pyrethione	Sodium Omadine was administered orally and dermally to laboratory animals and was found not to induce tumor formation as compared to control animals.

12. ECOLOGICAL INFORMATION

Overview: Toxic to wildlife and domestic animals., Highly/very toxic to fish and other aquatic organisms.

Ecological Toxicity Values for: Sodium Pyrithione

Rainbow trout (<i>Salmo gairdneri</i>),	- (measured, static) 96 h LC50 = 0.0066 - 0.008 mg/l (40% aqueous Sodium Omadine)
Bluegill	- (measured, static) 96 h LC50 = 7.6 - 9.6 mg/l (40% aqueous Sodium Omadine)
Daphnia magna,	- (nominal, static). 48 h LC50= 0.022 mg/l (40% aqueous Sodium Omadine)
Bobwhite quail	- acute oral LD50 = 441 mg/kg (40% aqueous Sodium Omadine)
Bobwhite quail	- 8 DAYS dietary LC50 = 3,075 ppm (40% aqueous Sodium Omadine)
Mallard duck	- 8 DAYS dietary LC50 = 10,033 ppm (40% aqueous Sodium Omadine)
Bobwhite quail	- acute oral LD50 = 200 mg/kg (94.9% aqueous Sodium Omadine)
Mallard duck	- acute oral LD50 = 92 mg/kg (94.9% aqueous Sodium Omadine)

13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : Spent or discarded material is not expected to be a hazardous waste.

Disposal Methods : As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : Not applicable

14. TRANSPORT INFORMATION

Land (US DOT): NOT REGULATED AS A DOT HAZARDOUS MATERIAL
Water (IMDG): SAME AS LAND,

Flash Point: None
Air (IATA): SAME AS LAND,
Emergency Response Guide Number: Not applicable

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPA Pesticide Registration Number: 1258-1213

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):
 Health Immediate (Acute) Health Hazard
 Physical None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302	TPQ (threshold planning quantity)	None established
------------	-----------------------------------	------------------

Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	None established
ZUS_SAR302	Reportable quantity	None established

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313	De minimis concentration	None established
------------	--------------------------	------------------

Clean Air Act Toxic ARP Section 112r:

CAA 112R	None established
----------	------------------

Clean Air Act Socmi:

HON SOC	None established
---------	------------------

Clean Air Act VOC Section 111:

CAA 111	None established
---------	------------------

Clean Air Act Haz. Air Pollutants Section 112:

ZUS_CAAHAP	None established
------------	------------------

ZUS_CAAHRP	None established
------------	------------------

CAA AP	None established
--------	------------------

State Right-to-Know Regulations Status of Ingredients

Pennsylvania:

MATERIAL SAFETY DATA SHEET

CAS #	COMPONENT NAME
ZUSPA_RTK	None established

New Jersey:

CAS #	COMPONENT NAME
ZUSNJ_RTK	None established

Massachusetts:

CAS #	COMPONENT NAME
ZUSMA_RTK	None established

California Proposition 65:

CAS #	COMPONENT NAME
ZUSCA_P65	None established

WHMIS Hazard Classification:

None established

16. OTHER INFORMATION

MSDS REVISION STATUS : Revised to meet the ANSI standard of 16 sections
SECTIONS REVISED: 15
Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .