

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

## **SODIUM OMADINE® 40% AQUEOUS SOLUTION**

Version 1.2 / EN

Revision Date 11.09.2014

Print Date 15.09.2014

### **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

#### **1.1 Product identifier**

Trade name : SODIUM OMADINE® 40% AQUEOUS SOLUTION  
Product code : 49244

#### **1.2 Relevant identified uses of the substance or mixture and uses advised against**

Use of the : Biocide  
Substance/Mixture

#### **1.3 Details of the supplier of the safety data sheet**

Company : Arch UK Biocides  
Wheldon Road  
Castleford  
United Kingdom  
WF10 2JT

Telephone : +44 (0)1977 714200  
Telefax : +44 (0)1977 714003  
Responsible/issuing person : sdsbiocides@archchemicals.com  
E-mail address

#### **1.4 Emergency telephone number**

Emergency telephone : +44 (0)1235 239 670  
number

### **SECTION 2: Hazards identification**

#### **2.1 Classification of the substance or mixture**

##### **Classification (67/548/EEC, 1999/45/EC)**

Harmful	R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
Irritant	R36/38: Irritating to eyes and skin.
Dangerous for the environment	R50: Very toxic to aquatic organisms.

#### **2.2 Label elements**

##### **Labelling according to EC Directives (1999/45/EC)**

Hazard pictograms :



# SODIUM OMADINE® 40% AQUEOUS SOLUTION

	Harmful	Dangerous for the environment
R-phrase(s)	: R20/21/22 R36/38 R50	Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes and skin. Very toxic to aquatic organisms.
S-phrase(s)	: S26 S28 S36/37/39 S61	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Hazardous components which must be listed on the label:

- Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2

## 2.3 Other hazards

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Aqueous solution of biocides

#### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
Pyridine-2-thiol 1-oxide, sodium salt	3811-73-2 223-296-5	Xn; R20-R21- R22 Xi; R36-R38 N; R50	Acute Tox.4; H302 Acute Tox.4; H312 Skin Irrit.2; H315 Eye Irrit.2A; H319 Acute Tox.4; H332 Aquatic Acute1; H400 Aquatic Chronic1; H410	>= 25 - < 50

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air.

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

Keep patient warm and at rest.  
Give oxygen or artificial respiration if needed.  
When symptoms persist or in all cases of doubt seek medical advice.

- In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off immediately with plenty of water for at least 15 minutes.  
If a person feels unwell or symptoms of skin irritation appear, consult a physician.  
Wash contaminated clothing before re-use.
- In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.  
Keep eye wide open while rinsing.  
Immediate medical attention is required.
- If swallowed : Do NOT induce vomiting.  
Never give anything by mouth to an unconscious person.  
If you feel unwell, seek medical advice (show the label where possible).

### 4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : See chapter  
11. Toxicological information

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

---

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Carbon dioxide (CO<sub>2</sub>)  
Water spray

- Unsuitable extinguishing media : Do NOT use water jet.

### 5.2 Special hazards arising from the substance or mixture

- Specific hazards during firefighting : The product is not flammable.  
Do not allow run-off from fire fighting to enter drains or water courses.  
Burning produces noxious and toxic fumes.

### 5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Standard procedure for chemical fires.

---

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Ensure adequate ventilation.  
Avoid contact with the skin and the eyes.  
Refer to protective measures listed in sections 7 and 8.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Take off contaminated clothing and shoes immediately.  
Wash contaminated clothing before re-use.

### 6.2 Environmental precautions

- Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.  
If the product contaminates rivers and lakes or drains inform respective authorities.  
Prevent further leakage or spillage if safe to do so.

### 6.3 Methods and materials for containment and cleaning up

- Methods for cleaning up : Soak up with inert absorbent material.  
Sand  
Retain and dispose of contaminated wash water.
- : Pick up and transfer to properly labelled containers.  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

- Additional advice : See chapter  
8. Exposure controls/personal protection  
13. Disposal considerations

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid formation of aerosol.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Store in original container.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Use appropriate container to avoid environmental contamination.

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

	: Protect from sunlight.
Other data	: No decomposition if stored and applied as directed.
Storage period	: 24 Months
Storage temperature	: < 54 °C

### 7.3 Specific end use(s)

: Not relevant

---

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Pyridine-2-thiol 1-oxide, sodium salt	3811-73-2	TWA	0.35 mg/m <sup>3</sup>		ARCH

### 8.2 Exposure controls

#### Engineering measures

Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

Respiratory protection	: In the case of aerosol or mist formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143).
Hand protection	: The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves must be inspected prior to use. Replace when worn. Impervious gloves Nitrile rubber
Eye protection	: Wear protective gloves/ protective clothing/ eye protection/ face protection. Safety glasses with side-shields

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.  
Lightweight protective clothing  
disposable one-piece overall with integral hood

Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat, drink or smoke.

Protective measures



### Environmental exposure controls

General advice : The product should not be allowed to enter drains, water courses or the soil.  
If the product contaminates rivers and lakes or drains inform respective authorities.  
Prevent further leakage or spillage if safe to do so.

---

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance	: liquid
Colour	: yellow amber
Odour	: slight
Flash point	: Note: Not applicable
Ignition temperature	: Remarks: not determined
Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Flammability (solid, gas)	: Not applicable
Explosive properties	: Note: Not applicable
Oxidizing properties	: Note: not determined
pH	: 8.5 - 10.5 at 40.00 g/l 25 °C
Freezing point/range	: -30 - -25.0 °C

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

Boiling point/boiling range	: 109 °C
Vapour pressure	: 0.025 hPa
Density	: 1.2 - 1.3 g/cm <sup>3</sup>
Water solubility	: 547.0 g/l Note: soluble
Partition coefficient: n-octanol/water	: Note: Not applicable
Solubility in other solvents	: Note: not determined
Viscosity, dynamic	: Note: not determined
Relative vapour density	: Note: Not applicable
Evaporation rate	: Note: not determined

### 9.2 Other information

Oxidising potential	: Note: Not relevant
---------------------	----------------------

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

None known.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	: Note: Stable under recommended storage conditions.
---------------------	--

### 10.4 Conditions to avoid

Conditions to avoid	: Extremes of temperature and direct sunlight.
---------------------	--

### 10.5 Incompatible materials

Materials to avoid	: Oxidizing agents
	: Strong acids

### 10.6 Hazardous decomposition products

Hazardous decomposition products	: Carbon monoxide Carbon dioxide (CO <sub>2</sub> ) Nitrogen oxides (NO <sub>x</sub> ) Sulphur oxides Sodium oxides
Thermal decomposition	: 250 °C

# SODIUM OMADINE® 40% AQUEOUS SOLUTION

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Acute oral toxicity : LD50 Oral  
SODIUM OMADINE® 40% Species: Rat  
AQUEOUS SOLUTION Dose: 1,500 mg/kg  
Remarks: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

: Remarks: Harmful if swallowed.

#### Acute oral toxicity

Components	Value	Species	Dose	Method
Pyridine-2-thiol 1-oxide, sodium salt	LC50	Rat	By calculation 750 mg/kg	

Acute inhalation toxicity : LC50  
SODIUM OMADINE® 40% Species: Rat  
AQUEOUS SOLUTION Dose: 2.7 mg/l  
Exposure time: 4 h  
Remarks: May cause irritation of respiratory tract.

: Remarks: Harmful by inhalation.

Acute dermal toxicity : LD50  
SODIUM OMADINE® 40% Species: Rabbit  
AQUEOUS SOLUTION Dose: 1,800 mg/kg

: Remarks: Harmful in contact with skin.

#### Acute dermal toxicity

Components	Value	Species	Dose	Method
Pyridine-2-thiol 1-oxide, sodium salt	LD50	Rabbit	By calculation 700 mg/kg	

#### Skin corrosion/irritation

Skin irritation : Remarks: Irritating to skin.  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION

#### Serious eye damage/eye irritation

Eye irritation : Remarks: Irritating to eyes.  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION



## SODIUM OMADINE® 40% AQUEOUS SOLUTION

### Respiratory or skin sensitisation

Sensitisation : Remarks: Not believed to be sensitising to skin.  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION

### Germ cell mutagenicity

Germ cell mutagenicity : Not believed to be mutagenic  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION  
Carcinogenicity : Animal testing did not show any carcinogenic effects.  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION  
Teratogenicity : Pyrithione: Reproductive and/or developmental toxicity was  
SODIUM OMADINE® 40% observed in laboratory animals only at high doses that were  
AQUEOUS SOLUTION maternally toxic

### Specific target organ toxicity - repeated exposure

SODIUM OMADINE® 40% : Pyrithione: Skeletal muscle atrophy and peripheral nerve  
AQUEOUS SOLUTION damage characterised by muscle weakness has been  
reported in animal studies after repeated exposures to high  
concentrations.  
Pyrithione: While the effects are possible with human  
exposure, based on the evaluation of the animal data these  
effects are unlikely to occur under industrial use.

### Toxicology Assessment

Further information : no data available  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION

---

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish : LC50  
SODIUM OMADINE® 40% Species: Oncorhynchus mykiss (rainbow trout)  
AQUEOUS SOLUTION Dose: 0.0066 mg/l  
Exposure time: 96 h

#### Toxicity to fish

Components	Value	Species	Dose	Exposure time	Method
Pyridine-2-thiol 1-oxide, sodium salt	LC50	Oncorhynchus mykiss (rainbow trout)	By calculation 0.00264 mg/l	96 h	

Toxicity to daphnia and other : LC50  
aquatic invertebrates Species: Daphnia magna (Water flea)

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

SODIUM OMADINE® 40%  
AQUEOUS SOLUTION

Dose: 0.022 mg/l  
Exposure time: 48 h

### Toxicity to daphnia and other aquatic invertebrates

Components	Value	Species	Dose	Exposure time	Method
Pyridine-2-thiol 1-oxide, sodium salt	LC50	Daphnia magna (Water flea)	By calculation 0.0088 mg/l	48 h	

### Toxicity to algae

Components	Value	Species	Dose	Exposure time	Method
Pyridine-2-thiol 1-oxide, sodium salt	EC50	Skeletonema costatum	By analogy 0.0012 mg/l	120 h	

### M-Factor

Pyridine-2-thiol 1-oxide, sodium salt : 100

## 12.2 Persistence and degradability

### Biodegradability

Pyridine-2-thiol 1-oxide, sodium salt : Remarks: Readily biodegradable.

## 12.3 Bioaccumulative potential

### Bioaccumulation

Pyridine-2-thiol 1-oxide, sodium salt : Bioconcentration factor (BCF): 50  
Remarks: Does not bioaccumulate.

## 12.4 Mobility in soil

### Mobility

Pyridine-2-thiol 1-oxide, sodium salt : Medium: Soil  
Remarks: immobile

## 12.5 Results of PBT and vPvB assessment

SODIUM OMADINE® 40% AQUEOUS SOLUTION : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT)., This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Pyridine-2-thiol 1-oxide, sodium salt : This substance is not considered to be persistent, bioaccumulating and toxic (PBT)., This substance is not considered to be very persistent and very bioaccumulating

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

(vPvB).

### 12.6 Other adverse effects

Photodegradation  
Pyridine-2-thiol 1-oxide,  
sodium salt : Remarks: Typical half lives are between several minutes and  
several hours depending on specific environmental conditions.

Additional ecological  
information : Very toxic to aquatic organisms.  
SODIUM OMADINE® 40%  
AQUEOUS SOLUTION

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : This material and its container must be disposed of as  
hazardous waste.  
The product should not be allowed to enter drains, water  
courses or the soil.  
Dispose of as hazardous waste in compliance with local and  
national regulations.  
According to the European Waste Catalogue, Waste Codes  
are not product specific, but application specific.

Contaminated packaging : Dispose of as unused product.  
Do not re-use empty containers.

## SECTION 14: Transport information

Dangerous for Transport

### IATA

<b>14.1</b>	<b>UN number</b>	: 3082
<b>14.2</b>	<b>Proper shipping name</b>	: Environmentally hazardous substance, liquid, n.o.s. (Sodium Pyrithione)
<b>14.3</b>	<b>Transport hazard class</b>	: 9
<b>14.4</b>	<b>Packing group</b>	: III
	Labels	: 9MI
<b>14.5</b>	<b>Environmental hazards</b>	: yes

### IMDG

<b>14.1</b>	<b>UN number</b>	: 3082
<b>14.2</b>	<b>Proper shipping name</b>	: Environmentally hazardous substance, liquid, n.o.s. (Sodium Pyrithione)
<b>14.3</b>	<b>Transport hazard class</b>	: 9
<b>14.4</b>	<b>Packing group</b>	: III
	Labels	: 9
	EmS Number 1	: F-A
	EmS Number 2	: S-F
<b>14.5</b>	<b>Environmental hazards</b>	: Marine pollutant: yes

### ADR

<b>14.1</b>	<b>UN number</b>	: 3082
<b>14.2</b>	<b>Proper shipping name</b>	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium Pyrithione)
<b>14.3</b>	<b>Transport hazard class</b>	: 9
<b>14.4</b>	<b>Packing group</b>	: III
	Classification Code	: M6
	Hazard Identification Number	: 90
	Labels	: 9
<b>14.5</b>	<b>Environmental hazards</b>	: yes

### RID

<b>14.1</b>	<b>UN number</b>	: 3082
<b>14.2</b>	<b>Proper shipping name</b>	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium Pyrithione)
<b>14.3</b>	<b>Transport hazard class</b>	: 9
<b>14.4</b>	<b>Packing group</b>	: III
	Classification Code	: M6
	Hazard Identification Number	: 90
	Labels	: 9
<b>14.5</b>	<b>Environmental hazards</b>	: yes

## SODIUM OMADINE® 40% AQUEOUS SOLUTION

### DOT

14.1	UN number	:	3082
14.2	Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Sodium Pyrithione)
14.3	Transport hazard class	:	9
14.4	Packing group	:	III
	Labels	:	9
	Emergency Response Guidebook Number	:	171
14.5	Environmental hazards	:	yes

### TDG

14.1	UN number	:	3082
14.2	Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium Pyrithione)
14.3	Transport hazard class	:	9
14.4	Packing group	:	III
	Labels	:	9
14.5	Environmental hazards	:	yes
14.6	Special precautions for user	:	
	Other information	:	Refer to protective measures listed in sections 7 and 8.
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	
	Remarks	:	Not relevant

---

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Major Accident Hazard Legislation	:	96/82/EC      Update: 2003 Dangerous for the environment 9a Quantity 1: 100 t Quantity 2: 200 t
Water contaminating class (Germany)	:	WGK 2 water endangering
Volatile organic compounds (VOC) content	:	Directive 1999/13/EC Not applicable

### 15.2 Chemical Safety Assessment

Not applicable

---

## SECTION 16: Other information

### Full text of R-Phrases

R20	: Harmful by inhalation.
R21	: Harmful in contact with skin.
R22	: Harmful if swallowed.
R36	: Irritating to eyes.
R38	: Irritating to skin.
R50	: Very toxic to aquatic organisms.

### Full text of H-Statements

H302	: Harmful if swallowed.
H312	: Harmful in contact with skin.
H315	: Causes skin irritation.
H319	: Causes serious eye irritation.
H332	: Harmful if inhaled.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

### Further information

OMADINE is a trade mark of ARCH CHEMICALS INC

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

---