SAFETY DATA SHEET
AquaSource Formaldehyde Solution

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : AquaSource Formaldehyde Solution
Other means of identification : Not applicable.
Recommended use : BIOCIDE
Restrictions on use : Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company : Blue Ridge Elements, LLC
3730 Old Tasso Rd NE
Cleveland, TN 37312 USA
TEL: (423) 698-0801

Emergency telephone number : (800) 424-9300 (24 Hours) CHEMTREC
Issuing date : 04/3/2017

Section: 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 4
Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 3
Skin corrosion : Category 1B
Serious eye damage : Category 1
Skin sensitization : Category 1
Carcinogenicity : Category 1A
Specific target organ toxicity : Category 1 (Eyes)
- single exposure
Specific target organ toxicity : Category 2 (Central Nervous System)
- single exposure
Specific target organ toxicity : Category 3 (Respiratory system)
- single exposure

GHS Label element
Hazard pictograms :

Signal Word : Danger
Hazard Statements : Combustible liquid
Toxic if swallowed or if inhaled
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause respiratory irritation.
May cause cancer. 
Causes damage to organs (Eyes, Central Nervous System).

Precautionary Statements :

Prevention: 
Do not breathe dust/fume/gas/mist/vapours/spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: 
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/ physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or doctor/ physician.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Concentration: (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

Section: 4. FIRST AID MEASURES

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

If swallowed : Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

If inhaled : Remove to fresh air. Treat symptomatically. Get medical attention immediately.

Protection of first-aiders : In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES
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Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: None known.

Specific hazards during firefighting: Fire Hazard
Keep away from heat and sources of ignition.
Flash back possible over considerable distance.

Hazardous combustion products: Decomposition products may include the following materials: Carbon oxides

Special protective equipment for firefighters: Use personal protective equipment.

Specific extinguishing methods: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions: Do not allow contact with soil, surface or ground water.

Methods and materials for containment and cleaning up: Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling: Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Do not ingest. Keep away from fire, sparks and heated surfaces. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Use only with adequate ventilation.


Suitable material: Keep in properly labelled containers.

Unsuitable material: not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Form of exposure</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>Ceiling</td>
<td>0.3 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>0.016 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceiling</td>
<td>0.1 ppm</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>0.75 ppm</td>
<td>OSHA CARC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>2 ppm</td>
<td>OSHA CARC</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm&lt;br&gt;260 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>250 ppm&lt;br&gt;325 mg/m³</td>
<td>NIOSH REL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm&lt;br&gt;260 mg/m³</td>
<td>OSHA Z1</td>
</tr>
</tbody>
</table>

Engineering measures: Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection: Safety goggles<br>Face-shield

Hand protection: Wear the following personal protective equipment:<br>Standard glove type.<br>Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection: Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection: When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid

Colour: clear, colourless

Odour: pungent

Flash point: 60.6 - 62.8 °C, Method: Tag closed cup

pH: 3.5 - 4.5, Neat

Odour Threshold: no data available
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Melting point/freezing point : no data available
Initial boiling point and boiling range : 100 °C
Evaporation rate : 1
Flammability (solid, gas) : no data available
Upper explosion limit : no data available
Lower explosion limit : no data available
Vapour pressure : 40 mm Hg,
Relative vapour density : 1
Relative density : 1.078 - 1.087, (15.6 °C),
Density : no data available
Water solubility : soluble
Solubility in other solvents : no data available
Partition coefficient: n-octanol/water : no data available
Auto-ignition temperature : no data available
Thermal decomposition temperature : no data available
Viscosity, dynamic : < 10 mPa.s
Viscosity, kinematic : no data available
Molecular weight : no data available
VOC : no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : Decomposition products may include the following materials: Carbon oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact
Potential Health Effects
Eyes : Causes serious eye damage.
## SAFETY DATA SHEET

### AquaSource Formaldehyde Solution

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skin</strong></td>
<td>Toxic in contact with skin. Causes severe skin burns. May cause allergic skin reaction.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>May cause blindness if swallowed. Toxic if swallowed. Causes digestive tract burns.</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Toxic if inhaled. May cause respiratory tract irritation. May cause nose, throat, and lung irritation.</td>
</tr>
<tr>
<td><strong>Chronic Exposure</strong></td>
<td>May cause cancer. May cause damage to organs.</td>
</tr>
</tbody>
</table>

### Experience with human exposure

**Eye contact**: Redness, Pain, Corrosion  
**Skin contact**: Redness, Pain, Irritation, Corrosion, Allergic reactions  
**Ingestion**: Corrosion, Abdominal pain  
**Inhalation**: Respiratory irritation, Cough

### Toxicity

#### Product

**Acute oral toxicity**: Acute toxicity estimate: 200 mg/kg  
**Acute inhalation toxicity**: Acute toxicity estimate: 6 mg/l  
**Acute dermal toxicity**: no data available  
**Skin corrosion/irritation**: no data available  
**Serious eye damage/eye irritation**: no data available  
**Respiratory or skin sensitization**: no data available  
**Carcinogenicity**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC</td>
<td>Group 1: Carcinogenic to humans 50-00-0</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA specifically regulated carcinogen 50-00-0</td>
</tr>
<tr>
<td>NTP</td>
<td>Known to be human carcinogen 50-00-0</td>
</tr>
</tbody>
</table>

**Reproductive effects**: no data available  
**Germ cell mutagenicity**: no data available  
**Teratogenicity**: no data available  
**STOT - single exposure**: no data available  
**STOT - repeated exposure**: no data available
Aspiration toxicity : no data available

**Section: 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Environmental Effects : Toxic to aquatic life.

**Components**

Toxicity to fish : Methanol
LC50 : 15,400 mg/l
Exposure time: 96 h

**Components**

Toxicity to daphnia and other aquatic invertebrates : Formaldehyde
EC50 : 5.8 mg/l
Exposure time: 48 h

Methanol
EC50 : > 10,000 mg/l
Exposure time: 48 h

**Components**

Toxicity to algae : Formaldehyde
EC50 : 3.48 mg/l
Exposure time: 72 h

Methanol
EC50 : 22,000 mg/l
Exposure time: 72 h

**Components**

Toxicity to bacteria : Formaldehyde
19 mg/l

Methanol
> 1,000 mg/l

**Components**

Toxicity to fish (Chronic toxicity) : Formaldehyde
LC50: 21 mg/l
Exposure time: 96 h

Methanol
NOEC: 7,900 mg/l
Exposure time: 8.3 d

**Persistence and degradability**

no data available

**Mobility**
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no data available

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

The information presented only applies to the material as supplied. The classification or waste code may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated at the time of disposal to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

The presence of an RQ component (Reportable Quantity for U.S. DOT) in this product causes it to be regulated with an additional description of RQ for road, or as Environmentally hazardous for road and air, ONLY when the net weight in the package exceeds the calculated RQ for the product.

Land transport (DOT)

Proper shipping name : AQUASOURCE FORMALDEHYDE SOLUTION
Technical name(s) : UN 2209
UN/ID No. : 8
Transport hazard class(es) : III
Packing group : 270 lbs
Reportable Quantity (per package) : Formaldehyde
RQ Component

Air transport (IATA)

Proper shipping name : AQUASOURCE FORMALDEHYDE SOLUTION
Technical name(s) : UN 2209
UN/ID No. : 8
Transport hazard class(es) : III
Packing group : 270 lbs
Reportable Quantity (per
SAFETY DATA SHEET

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package)
RQ Component : Formaldehyde

Sea transport (IMDG/IMO)

Proper shipping name : AQUASOURCE FORMALDEHYDE SOLUTION :
Technical name(s) : UN 2209
UN/ID No. : 8
Transport hazard class(es) : III
Packing group

Section: 15. REGULATORY INFORMATION

EPA Reg. No. : 90924-11-92816

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>100</td>
<td>270</td>
</tr>
</tbody>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>100</td>
<td>270</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:
Formaldehyde 50-00-0

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
Formaldehyde 50-00-0 30 - 60 %
Methanol 67-56-1 10 - 30 %

California Prop 65
WARNING! This product contains a chemical known to the State of California to cause cancer.
Formaldehyde 50-00-0

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Methanol 67-56-1
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INTERNATIONAL CHEMICAL CONTROL LAWS :
United States TSCA Inventory
On the inventory, or in compliance with the inventory

Section: 16. OTHER INFORMATION

NFPA: Flammability

<table>
<thead>
<tr>
<th>Health</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Special hazard.

HMIS III:

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>3*</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABILITY</td>
<td>2</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
<td>0</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

Revision Date : 04/3/2017
Version Number : 1.1
Prepared By : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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. For additional copies of an SDS visit www.blueridgeelements.com.