According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.03.2017

Xylenol Orange

SECTION 1: Identification

Product identifier

Product name: Xylenol Orange Product code: XO4550SS

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals Uses advised against: Not determined or not applicable. Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer: United States AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 1-717-632-1291

Emergency telephone number: Canada ChemTel: (24-hour) +1(800)255-3924 +1(813)248-0585 (International)

SECTION 2: Hazard(s) identification

GHS classification:

Corrosive to metals, category 1 Eye irritation, category 2A Skin corrosion, category 1B Skin sensitization, category 1 Specific target organ toxicity - single exposure, category 3, respiratory irritation Carcinogenicity, category 2 Specific target organ toxicity - single exposure, category 2

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

- H290 May be corrosive to metals.
- H319 Causes serious eye irritation.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H371 May cause damage to organs.

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Precautionary statements:

P234 Keep only in original container.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P270 Do not eat, drink or smoke when using this product.

P390 Absorb spillage to prevent material damage.

P309+P311 If exposed or you feel unwell: Call a poison center or doctor/physician.

P321 Specific treatment (see supplemental first aid instructions on this label).

P363 Wash contaminated clothing before reuse.

P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. P302+P352 If on skin: Wash with soap and water.

P333+P313 If skin irritation or a rash occurs: Get medical advice/attention.

P405 Store locked up.

P403+P233 Store in a well ventilated place. Keep container tightly closed.

P501 Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

| Identification | Name | Weight % |
|--------------------------|--------------------------------|----------|
| CAS number: 7732-18-5 | Water | <57 |
| CAS number: 7647-01-0 | Hydrochloric Acid | 33 |
| CAS number: 3618-43-7 | Xylenol Orange, Sodium salt | 0.2 |
| CAS number: 5470-11-1 | Hydroxylammonium Hysrochloride | 10 |

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Move exposed individual to fresh air

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Loosen clothing as necessary and position individual in a comfortable position Maintain an unobstructed airway Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

Immediately remove all contaminated clothing Wash affected area with soap and water Immediately call a POISON CONTROL CENTER or seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes Remove contact lens(es) if able to do so during rinsing Immediately call a POISON CONTROL CENTER or seek medical attention

After swallowing:

Immediately call a POISON CONTROL CENTER or seek medical attention Do not induce vomiting Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors May form corrosive mixtures with water

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Not determined or not applicable.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

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Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Protect from freezing and physical damage.

Store in a cool, well-ventilated area.

Store in corrosive resistant container with a resistant inner lining.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

| Country (Legal Basis) | Substance | Identifier | Permissible concentration |
|-----------------------|-------------------|------------|-----------------------------------|
| ACGIH | Hydrochloric Acid | 7647-01-0 | ACGIH TLV C 2.0 ppm |
| United States (OSHA) | Hydrochloric Acid | 7647-01-0 | OSHA PEL C 5.0 ppm |
| | Hydrochloric Acid | 7647-01-0 | OSHA PEL C 7.0 mg/m ³ |
| NIOSH | Hydrochloric Acid | 7647-01-0 | NIOSH REL C 5.0 ppm |
| | Hydrochloric Acid | 7647-01-0 | NIOSH REL C 7.0 mg/m ³ |

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

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Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of work. Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| Appearance | Greenish yellow liquid |
|---|----------------------------------|
| Odor | Slightly pungent |
| Odor threshold | Not available |
| рН | Not available |
| Melting point/freezing point | Not available |
| Initial boiling point/range | Not available |
| Flash point (closed cup) | Not available |
| Evaporation rate | Not available |
| Flammability (solid, gas) | Not available |
| Upper flammability/explosive limit | Not available |
| Lower flammability/explosive limit | Not available |
| Vapor pressure | Not available |
| Vapor density | Not available |
| Density | Not available |
| Relative density | Not available |
| Solubilities | Not determined or not available. |
| Partition coefficient (n-octanol/water) | Not available |
| Auto/Self-ignition temperature | Not available |
| Decomposition temperature | Not available |
| Dynamic viscosity | Not available |
| Kinematic viscosity | Not available |
| Explosive properties | Not determined or not available. |
| Oxidizing properties | Not determined or not available. |

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

Does not react under normal conditions of use and storage.

Conditions to avoid:

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None known.

Incompatible materials:

None known.

Hazardous decomposition products:

None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

| Name | Route | Result |
|-----------------------------------|------------|-------------------------------|
| Hydrochloric Acid | inhalation | LC50 - Mouse - 1,108 ppm / 1h |
| Hydroxylammonium Hysrochloride | oral | LD50: Rat - 141 mg/kg |

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

| Name | Result |
|-----------------------------------|--|
| Hydroxylammonium Hysrochloride | Causes skin irritation. |
| Hydrochloric Acid | Causes severe skin burns and eye damage. |

Serious eye damage/irritation

Assessment: Causes serious eye irritation

Product data: No data available.

Substance data:

| Name | Result |
|-----------------------------------|--------------------------------|
| Hydroxylammonium Hysrochloride | Causes serious eye irritation. |

Respiratory or skin sensitization

Assessment: May cause an allergic skin reaction

Product data: No data available.

Substance data:

| Name | Result |
|-----------------------------------|--------------------------------------|
| Hydroxylammonium Hysrochloride | May cause an allergic skin reaction. |

Carcinogenicity

Assessment: Suspected of causing cancer

Product data: No data available.

Substance data:

| Name | Species | Result |
|-----------------------------------|---------------------------|------------------------------|
| Hydroxylammonium Hysrochloride | Hydroxylammonium Chloride | Suspected of causing cancer. |

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International Agency for Research on Cancer (IARC):

| Name | Classification |
|-------------------|--|
| Hydrochloric Acid | Group 3 - Not classifiable as to its carcinogenicity to humans |

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: May cause respiratory irritation May cause damage to organs

Product data: No data available.

Substance data:

| Name | Result |
|------|--|
| | Specific Target Organ Toxicity, Repeated Exposure - May cause damage to organs through prolonged or repeated exposure. |

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available. Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

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Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

| UN number | UN 1760 |
|-------------------------------|----------------------------|
| UN proper shipping name | Hydrochloric Acid Solution |
| UN transport hazard class(es) | 8 |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

International Maritime Dangerous Goods (IMDG)

| UN number | UN 1760 |
|-------------------------------|----------------------------|
| UN proper shipping name | Hydrochloric Acid Solution |
| UN transport hazard class(es) | 8 |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

| UN number | UN 1760 |
|-------------------------------|----------------------------|
| UN proper shipping name | Hydrochloric Acid Solution |
| UN transport hazard class(es) | 8 |
| Packing group | I |
| Environmental hazards | None |
| Special precautions for user | None |

| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | | |
|---|------|--|
| Bulk Name None | | |
| Ship type | None | |
| Pollution category None | | |

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Listed

Listed

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SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

| 7647-01-0 | Hydrochloric Acid | Listed |
|-----------|--------------------------------|--------|
| 7732-18-5 | Water | Listed |
| 3618-43-7 | Xylenol Orange, Sodium salt | Listed |
| 5470-11-1 | Hydroxylammonium Hysrochloride | Listed |

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

| Acute | Chronic | Fire | Pressure | Reactive |
|-------|---------|------|----------|----------|
| No | No | No | No | No |

SARA Section 302 extremely hazardous substances:

7647-01-0 Hydrochloric Acid

SARA Section 313 toxic chemicals:

| [| 7647 01 0 | Uvelre chlerie Aciel |
|---|-----------|----------------------|
| | 7647-01-0 | Hydrochloric Acid |

CERCLA:

| 7647-01-0 | Hydrochloric Acid | Listed | 5000 | |
|-----------|-------------------|--------|------|--|
|-----------|-------------------|--------|------|--|

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

| 5470-11-1 | Hydroxylammonium Hysrochloride | Not Listed |
|-----------|--------------------------------|---------------|
| 3618-43-7 | Xylenol Orange Sodium Salt | Not Listed |
| 7732-18-5 | Water | Not Listed |

New Jersey Right to Know:

| 5470-11-1 | Hydroxylammonium Hysrochloride | Not Listed |
|-----------|--------------------------------|---------------|
| 3618-43-7 | Xylenol Orange Sodium Salt | Not Listed |
| 7647-01-0 | Hydrochloric Acid | Listed |
| 7732-18-5 | Water | Not Listed |

New York Right to Know:

| 5470-11-1 | Hydroxylammonium Hysrochloride | Not Listed |
|-----------|--------------------------------|---------------|
| 3618-43-7 | Xylenol Orange Sodium Salt | Not Listed |
| 7732-18-5 | Water | Not Listed |

Pennsylvania Right to Know:

| 5470-11-1 | Hydroxylammonium Hysrochloride | Not |
|-----------|--------------------------------|--------|
| | | Listed |

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| 3618-43-7 | Xylenol Orange Sodium Salt | Not Listed |
|-----------|----------------------------|---------------|
| 7647-01-0 | Hydrochloric Acid | Listed |
| 7732-18-5 | Water | Not Listed |

California Proposition 65: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 3-0-0

HMIS: 3-0-0 Initial preparation date: 04.03.2017

End of Safety Data Sheet