Material Safety Data Sheet

Ethoxyquin

sc-205686

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Ethoxyquin

STATEMENT OF HAZARDOUS NATURE

NFPA

SUPPLIER
Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY
ChemWatch
Within the US & Canada: 877-715-9305
Outside the US & Canada: +800 2436 2255
(1-800-CHEMCALL) or call +613 9573 3112

SYNONYMS
C14-H19-N-O, “quinoline, 6-ethoxy-1, 2-dihydro-2, 2, 4-trimethyl-“, ”6-ethoxy-1, 2-dihydro-2, 2, 4-trimethyl-quinoline“, ”1, 2-dihydro-6-ethoxy-2, 2, 4-trimethylquinoline“, ”1, 2-dihydro-2, 2, 4-trimethyl-6-ethoxyquinoline“, ”6-ethoxy-2, 2, 4-trimethyl-1, 2-dihydroquinoline“, ”2, 2, 4-trimethyl-6-ethoxy-1, 2-dihydroquinoline“, ”Antioxidant EC“, EMQ, EQ, Ethoxychin, Niflex, Nix-scald, ”Santoflex A AW“, Santoquine, Nocrack, Stop-scald, ”agricultural antioxidant”

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

<table>
<thead>
<tr>
<th>Min</th>
<th>Max</th>
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</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
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<tr>
<td>Toxicity</td>
<td>2</td>
</tr>
<tr>
<td>Body Contact</td>
<td>2</td>
</tr>
<tr>
<td>Reactivity</td>
<td>1</td>
</tr>
<tr>
<td>Chronic</td>
<td>0</td>
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</table>

CANADIAN WHMIS SYMBOLS

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4
EMERGENCY OVERVIEW

RISK
Harmful if swallowed.
Harmful to aquatic organisms.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

EYE
■ Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN
■ The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis.
The material is unlikely to produce an irritant dermatitis as described in EC Directives.
■ Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED
■ The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models).
Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS
■ Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>NAME</th>
<th>CAS RN</th>
<th>%</th>
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<tbody>
<tr>
<td>ethoxyquin</td>
<td>91-53-2</td>
<td>&gt; 99</td>
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</tbody>
</table>

Section 4 - FIRST AID MEASURES

SWALLOWED
● IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
● For advice, contact a Poisons Information Centre or a doctor.
● Urgent hospital treatment is likely to be needed.
● In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

EYE
If this product comes in contact with the eyes
● Wash out immediately with fresh running water.
● Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
● Seek medical attention without delay; if pain persists or recurs seek medical attention.
● Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
If skin contact occurs
● Immediately remove all contaminated clothing, including footwear.
● Flush skin and hair with running water (and soap if available).
Seek medical attention in event of irritation.

INHALED
- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN
■ for poisons (where specific treatment regime is absent)

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BASIC TREATMENT
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- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Treat symptomatically.

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<tr>
<th>Vapor Pressure (mmHG)</th>
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<tr>
<td>Upper Explosive Limit (%)</td>
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<td>Specific Gravity (water=1)</td>
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<tr>
<td>Lower Explosive Limit (%)</td>
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</table>

EXTINGUISHING MEDIA
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include carbon dioxide (CO2), nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.
- May emit poisonous fumes.

FIRE INCOMPATIBILITY
- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result

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MINOR SPILLS
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapors and contact with skin and eyes.
- Control personal contact by using protective equipment.

MAJOR SPILLS
Moderate hazard.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.

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PROCEDURE FOR HANDLING
- DO NOT allow clothing wet with material to stay in contact with skin.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

**RECOMMENDED STORAGE METHODS**

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

**STORAGE REQUIREMENTS**

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

### Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE CONTROLS**

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<tr>
<th>Source</th>
<th>Material</th>
<th>TWA ppm</th>
<th>TWA mg/m³</th>
<th>STEL ppm</th>
<th>STEL mg/m³</th>
<th>Peak ppm</th>
<th>Peak mg/m³</th>
<th>TWA F/CC</th>
<th>Notes</th>
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</table>
Contaminants (Respirable fraction)

PERSONAL PROTECTION

**RESPIRATOR**
- Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 1432000 & 1492001, ANSI Z88 or national equivalent)

**EYE**
- Safety glasses with side shields
- Chemical goggles
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lenses should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

**HANDS/FEET**
- Wear chemical protective gloves, eg. PVC
- Wear safety footwear or safety gumboots, eg. Rubber

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include
- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

**OTHER**
- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

**ENGINEERING CONTROLS**
- Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
- The basic types of engineering controls are
  - Process controls which involve changing the way a job activity or process is done to reduce the risk.
  - Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

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**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>State</td>
<td>Liquid</td>
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<tr>
<td>Molecular Weight</td>
<td>217.31</td>
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<tr>
<td>Melting Range (°F)</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Boiling Range (°F)</td>
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<td>Solubility in water (g/L)</td>
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<td>Flash Point (°F)</td>
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<td>pH (1% solution)</td>
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<td>pH (as supplied)</td>
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<td>Autoignition Temp (°F)</td>
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<td>Vapor Pressure (mmHG)</td>
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</table>
### Section 10 - CHEMICAL STABILITY

**CONDITIONS CONTRIBUTING TO INSTABILITY**
- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerization will not occur.

**STORAGE INCOMPATIBILITY**
- Avoid reaction with oxidizing agents

For incompatible materials - refer to Section 7 - Handling and Storage.

### Section 11 - TOXICOLOGICAL INFORMATION

**ethoxyquin**

**TOXICITY AND IRRITATION**
No data for this material.

### Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms.

**Ecotoxicity**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
<th>Bioaccumulation</th>
<th>Mobility</th>
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<tr>
<td>ethoxyquin</td>
<td>HIGH</td>
<td>No Data Available</td>
<td>LOW</td>
<td>MED</td>
</tr>
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</table>

### Section 13 - DISPOSAL CONSIDERATIONS

**Disposal Instructions**
All waste must be handled in accordance with local, state and federal regulations.
- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:
- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorized landfill.
- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:
- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
• Where in doubt contact the responsible authority.
• Recycle wherever possible or consult manufacturer for recycling options.
• Consult State Land Waste Authority for disposal.
• Bury or incinerate residue at an approved site.
• Recycle containers if possible, or dispose of in an authorized landfill.

Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

Section 15 - REGULATORY INFORMATION

ethoxyquin (CAS: 91-53-2) is found on the following regulatory lists;
"Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS (English)","US EPA High Production Volume Program Chemical List","US Food Additive Database","US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

Section 16 - OTHER INFORMATION

LIMITED EVIDENCE
■ Skin contact may produce health damage*.
  * (limited evidence).
■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
  A list of reference resources used to assist the committee may be found at: www.chemwatch.net/references.
■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.
■ For detailed advice on Personal Protective Equipment, refer to the following U.S. Regulations and Standards:
  OSHA Standards - 29 CFR:
  1910.132 - Personal Protective Equipment - General requirements
  1910.133 - Eye and face protection
  1910.134 - Respiratory Protection
  1910.136 - Occupational foot protection
  1910.138 - Hand Protection
  Eye and face protection - ANSI Z87.1
  Foot protection - ANSI Z41
  Respirators must be NIOSH approved.

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www.Chemwatch.net

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