

#009412



MSDS

REVISED April 11, 2007  
Supersedes: May 16, 2002

**SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME:	STOP-OX™
PRODUCT CODE:	097675
CHEMICAL FAMILY:	Not applicable.
CHEMICAL NAME:	Not applicable, mixture
SYNONYMS:	None
FORMULA:	Not applicable
TYPICAL USES:	

**CONTACT:** Trouw Nutrition USA, LLC  
115 Executive Drive  
Highland, IL  
618-654-2070

**SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Component</u>	<u>CAS Number</u>
6 ethoxy-1,2-dihydro-2,2,4-trimethylquinoline	*91-53-2

\*Hazardous chemical(s) under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**SECTION 3. HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW

Appearance and Odor: Red to black granules.

**WARNING!**  
**CAUSES SKIN IRRITATION**  
**MAY CAUSE EYE IRRITATION**  
**MAY CAUSE ALLERGIC SKIN REACTION**

POTENTIAL HEALTH EFFECTS

Likely Routes of Exposure: Skin contact and inhalation.

**EYE CONTACT:** This material is no more than slightly irritating based on toxicity and/or physical properties of the components. Dust may cause irritation to the eye, as would any foreign material.

**SKIN CONTACT:** This material is no more than slightly toxic based on toxicity studies with the components. Prolonged/repeated contact causes pain and redness and can discolor the skin to

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pink based on human experience. It may cause allergic skin reaction based on human experience.

INHALATION: No information.

INGESTION: This material is not more than slightly toxic based on toxicity studies. Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Refer to Section 11 for toxicological information.

#### **SECTION 4. FIRST AID MEASURES**

IF IN EYES OR ON SKIN: Immediately flush the area with plenty of water. If easy to do, remove any contact lenses. Remove contaminated clothing. Wash skin gently with soap as soon as it is available. Get medical attention. Wash clothing before reuse.

IF INHALED: Immediate first aid is not likely to be required. However, if symptoms occur, remove to fresh air. Remove material from eyes, skin and clothing.

IF SWALLOWED: Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice. Wash heavily contaminated clothing before reuse.

#### **SECTION 5. FIRE FIGHTING MEASURES**

Flash point: > 250 F(based on ethoxyquin)

Method: Closed cup

Extinguishing Media: In case of fire, use water spray (fog), foam, dry chemical, or CO2.

Unusual Fire and Explosion Hazards: This material as normally packaged and handled may contain sufficient fines to form an explosive mixture if dispersed in a sufficient quantity of air.

Fire Fighting Equipment: Firefighters and others exposed to products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

In case of spill, sweep, scoop or vacuum and remove. Flush residual spill area with water.

Refer to Section 13 for disposal information.

## **SECTION 7. HANDLING AND STORAGE**

Avoid contact with eyes, skin and clothing.  
Wash thoroughly after handling.  
Store away from articles subject to stain discoloration

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Storage: Store at ambient temperature conditions. See discussion on stability, Section 10.

## **SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION**

**EYE PROTECTION:** Where there is significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

**SKIN PROTECTION:** Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove/clothing manufacturer to determine appropriate type glove for given application. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

Attention! Repeated or prolonged contact may cause allergic skin reaction in some people.

**RESPIRATORY PROTECTION:** Avoid breathing dust. Use NIOSH/MSHA approved equipment when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must be in compliance with 29 CFR 1910.134.

**VENTILATION:** Provide natural or mechanical ventilation to minimize exposure. The use of local mechanical exhaust ventilation at sources of air contamination such as open process equipment is preferred.

Airborne Exposure Limits:

<u>Product/Component</u>	<u>OSHA PEL</u>	<u>AGIH TLV</u>
STOP-OX™	None established	None established
6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline	None established	None established

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance: Red to black granules

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## **SECTION 10. STABILITY AND REACTIVITY**

Stability: This material should NOT be heated or stored above ambient temperature conditions. In production of this formulation, heat is liberated in adding ethoxyquin to the inert carrier material. The mixture should be allowed to cool to ambient temperature to preclude conditions that could lead to self-heating and ultimately decomposition and ignition.

Materials to Avoid: Contact with acids should be avoided.

Hazardous Decomposition Products: No uniquely hazardous decomposition products are expected. If the product is burned, as with any nitrogen-containing organic material, oxides of nitrogen, carbon dioxide, and carbon monoxide can be produced.

Hazardous Polymerization: Does not occur.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### Toxicological Data

Data from laboratory studies from the scientific literature on ethoxyquin preservative are summarized below.

Single exposure (acute) studies include:

Oral - Slightly Toxic (Rat LD - 2,000 mg/kg)

### Components

Data from the scientific literature on ethoxyquin, the major component and active ingredient of STOP-OX™ preservative:

### Ethoxyquin

Oral toxicity – slightly toxic (Rat LD50 – 2040 mg/kg). Dermal toxicity – No more than slightly toxic (Rabbit LD50 - > 3,160 mg/kg). Eye Irritation – Slightly irritating (Rabbit, 2.2/110.0). Skin Irritation – Slightly irritating (Rabbit, 24-hr exposure, 1.1/8.0).

In dietary feeding studies with rodents, repeated dosing with high levels of ethoxyquin greatly in excess of use levels was reported to cause liver, kidney and bladder changes, reduced body weights and food consumption, elevated bladder DNA synthesis and to alter immune function (humoral). No effects were seen at dietary levels near the use concentration.

A two-generation reproduction/chronic toxicity study in dogs completed over 3 ½ years found no evidence that ethoxyquin, when added to the feed, interfered with parental reproductive performance or progeny development. Liver pigmentation was observed in some dogs; the pigment was identified as protoporphyrin IX. The pigmentation was not associated with pathologic changes in the liver although high dose dogs which exhibited marked pigmentation had elevations in serum enzymes.

Dark livers have been observed in marmosets and chickens fed high dietary levels of ethoxyquin as a result of errors in preparing dietary premixes that contained ethoxyquin.

Ethoxyquin has generally produced no genetic changes in standard tests using animals, fruit flies or bacterial cells. Ethoxyquin was reported to both enhance and inhibit genetic changes induced by known carcinogens in standard tests using bacterial cells.

Metabolism studies with rats have shown that ethoxyquin is readily changed to polar conjugates in the body and eliminated in urine and feces. At low exposure levels, there is not evidence of accumulation of ethoxyquin or its metabolites in tissues.

## SECTION 12. ECOLOGICAL INFORMATION

Environmental studies have not been conducted with this product. Studies have been conducted with the major component ethoxyquin. These data are provided below.

Invertebrate:	48-hr EC <sub>50</sub> Daphnia Magna,	2.0 mg/L, Toxic
Cold water fish:	96-hr LC <sub>50</sub> Rainbow trout,	18 mg/L, Harmful

The data above have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity. A legend summarizing the classification scheme appears below.

Legend for Aquatic Organism Toxicity (Journal of the European Communities, Annex: VII A, Section 5.2.1)

<u>Values</u>	<u>Classification</u>
LC <sub>50</sub> or EC <sub>50</sub> less than or equal to 1.0 mg/L	Very toxic
LC <sub>50</sub> or EC <sub>50</sub> > 1.0 mg/L and less than or equal to 10 mg/L	Toxic
LC <sub>50</sub> or EC <sub>50</sub> > 10 mg/L and less than or equal to 100 mg/L	Harmful
LC <sub>50</sub> or EC <sub>50</sub> > 100 mg/L	Practically Nontoxic

## SECTION 13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of by incineration or recycle in accordance with local, state and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

## SECTION 14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

This product is not hazardous under the applicable DOT/ICAO/IATA. Or IMDG regulations.

## SECTION 15. REGULATORY INFORMATION

TSCA Inventory: All components are listed.

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370): Immediate, delayed

Section 302 Extremely Hazardous Substances: Not applicable

Section 313 Toxic Chemical(s): Not applicable

CERCLA Reportable Quantity: Not applicable

The United States Food and Drug Administration regulates ethoxyquin as a direct animal feed additive and some limited uses as a human food additive under several sections of Title 21 CFR (Code of Federal Regulations).

Refer to Section 2 for OSHA Hazardous Chemical(s).

## **SECTION 16. OTHER INFORMATION**