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# MATERIAL SAFETY DATA SHEET

Date Issued: 07/01/2008  
MSDS No: Robelle Sticks  
Date Revised: 09/11/2008  
Revision No: 2

## Robelle Sticks

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Robelle Sticks  
**GENERAL USE:** Swimming Pool Sanitizer  
**PRODUCT DESCRIPTION:** Trichloro-s-triazinetriene  
**GENERIC NAME:** Trichlorisocyanuric Acid  
**ACTIVE INGREDIENT(S):** Trichloro-s-triazinetriene

#### DISTRIBUTOR

Robelle Industries, Inc.  
131 Tosca Dr.  
Stoughton MA 02072  
**Product Stewardship:** (781) 297-7422

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** White tablet

**IMMEDIATE CONCERNS:** Highly corrosive. Causes irreversible eye damage and burns to skin. May be fatal if swallowed. Will burn with the evolution of chlorine and equally toxic gases. Do not get in eyes, on skin or clothing. Avoid breathing dust and fumes.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Dust and vapors can cause irritation, redness, tearing and burns. Corrosive, contact causes severe eye burns.

**SKIN:** Initially non-irritating but prolonged contact will produce chemical burns. Burns are also induced when moisture is added.

**INGESTION:** May cause Irritation or burns to the gastrointestinal tract.

**INHALATION:** Irritating to nose, mouth, throat and lungs. May cause burns to respiratory tract.

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

**ACUTE TOXICITY:** Prolonged exposure may result in irritation to eyes, skin and mucous membranes.

**ROUTES OF ENTRY:** Eyes, Skin, Respiratory and Digestive Tract

**CANCER STATEMENT:** NA = Not Applicable

**IRRITANCY:** Acute Effects: Corrosive to eyes and irritating to skin. Irritating to nose and throat.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Chemical Name	Wt.%	CAS	EINECS
Trichloro-s-triazinetrione	99	000087-90-1	201-782-8

### 4. FIRST AID MEASURES

**EYES:** Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.

**SKIN:** In case of contact, immediately brush off excess product and flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If irritation develops, get medical attention.

**INGESTION:** Immediately drink large quantities of water. Do NOT induce vomiting. Call a physician at once. Do not give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** NA = Not Applicable

**FLAMMABLE LIMITS:** 0 to 0

**EXTINGUISHING MEDIA:** Spray or fog, heavy deluge or fog streams.

**FIRE FIGHTING PROCEDURES:** Flood with copious amounts of water. Use great care in approaching wet containers of hot product as these conditions lead to NC13 formation, an explosive substance.

**FIRE FIGHTING EQUIPMENT:** Firefighters should wear full protective clothing and SCBA when potential for exposure to products of combustion exists. Use large amounts of water. Small quantities of water with large quantities of hot product may lead to fire or explosion. Do not use CO<sub>2</sub>, dry chemical, foam or halon.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposes at 225 Deg C. Keep inflammable materials away from product. Highly reactive oxidizing materials may result in fire.

### 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Sweep up spills with a dry broom. Contain material and do not allow material to sit on ground and become moist. Do not contaminate with water, organics or nitrogen containing compounds.

#### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** This product is toxic to fish and aquatic life.

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### 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Use with adequate ventilation.

**HANDLING:** Keep away from moisture, sunlight and high temperatures. Keep away from flammable liquids, combustibles and oxidizers. Avoid dust formation.

**STORAGE:** Keep containers tightly closed in a dry, well-ventilated area. Do not store at temperatures above 60 Deg C/140 Deg F.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Trichloro-s-triazinetrione	TWA	Not Established	Not Established	Not Established	Not Established	[1]	[1]
	STEL	Not Established	Not Established	Not Established	Not Established		

**Footnotes:**  
 1. The TLV for Chlorine is 0.5 ppm (1.5 mg/m<sup>3</sup>) TWA and 1ppm STEL.

**ENGINEERING CONTROLS:** Local exhaust with circulation to the outside is needed in the event of decomposition which produces fumes and chlorine gas.

#### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear chemical safety glasses or goggles.

**SKIN:** Neoprene gloves. Wash thoroughly after handling.

**RESPIRATORY:** For product manufacturing or emergency situations, wear an OSHA-NIOSH approved full facepiece respirator equipped with chemical cartridge.

**PROTECTIVE CLOTHING:** Neoprene apron and impervious clothing.

**WORK HYGIENIC PRACTICES:** Provide safety shower and eyewash station in the work area.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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Chemical Name	Solubility in Water	Specific Gravity
Trichloro-s-triazinetriene	1.28 g/100 mg @ 25 deg C	2.07

**PHYSICAL STATE:** Solid

**ODOR:** Chlorine.

**APPEARANCE:** White stick.

**pH:** 2.8

**VAPOR PRESSURE:** NA = Not Applicable

**VAPOR DENSITY:** NA = Not Applicable

**BOILING POINT:** NA = Not Applicable

**FREEZING POINT:** NA = Not Applicable

**FLASHPOINT AND METHOD:** NA = Not Applicable

**SPECIFIC GRAVITY:** 2.070

**(VOC):** 99.000

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable.

**POLYMERIZATION:** Product will not undergo polymerization.

**CONDITIONS TO AVOID:** Avoid temperatures above 225 degrees C / 437 deg F as decomp produces toxic gases. Do not store near combustible materials.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Nitrogen trichloride, chlorine, nitrous oxides.

**INCOMPATIBLE MATERIALS:** Avoid contact with organic matter. Avoid contact with easily chlorinated or oxidized materials which may result in fire.

Avoid contact with ammonia, ammonium salts, urea or similar compounds which contain nitrogen. This may form nitrogen trichloride, a highly explosive compound.

Avoid contamination with oils and greases which may cause decomposition with the formation of CO<sub>2</sub> and Cl<sub>2</sub>.

This product may form an explosive mixture with calcium hypochlorite.

In a formulation containing this material as the major component, alkaline materials such as soda ash (Na<sub>2</sub>CO<sub>3</sub>) in the presence of moisture may cause violent decomposition and fire.

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Avoid contact with alcohols, ethers, and solvents (toluene, xylene, turpentine, etc.)

Avoid contact with small amounts of water. (Do not add water to chemical, add chemical to water.)

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE

**ORAL LD<sub>50</sub>:** 1060 mg/kg (rat)

**Notes:** No abnormal signs are observed on the subacute toxicity test of oral administration (10-400 mg/kg) on rats for a month.

#### CARCINOGENICITY

**IARC:** NA = Not Applicable

**NTP:** NA = Not Applicable

**OSHA:** NA = Not Applicable

### 12. ECOLOGICAL INFORMATION

#### AQUATIC TOXICITY (ACUTE)

**48-HOUR EC<sub>50</sub>:** 1.5 TLM ppm Oryzias Latipes

**Notes:** Do not discharge into drains or waterways.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Dispose of in accordance with applicable local, state, and federal regulations.

### 14. TRANSPORT INFORMATION

#### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Trichloroisocyanuric Acid Dry

**PRIMARY HAZARD CLASS/DIVISION:** 5.1

**UN/NA NUMBER:** UN 2468

**PACKING GROUP:** II

**NAERG:** 140

**LABEL:** 5.1 Oxidizer

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**SPECIAL SHIPPING NOTES:** DOT Special Provisions: IB8, IP4, T3, TP33

Packaging Exceptions: 152  
 Nonbulk: 212  
 Bulk: 240

### 15. REGULATORY INFORMATION

#### UNITED STATES

#### CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** Not listed.

**CERCLA RQ:** Not listed.

**REPORTABLE SPILL QUANTITY:** N/A (for chlorine RQ=10)

#### TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Trichloro-s-triazinetrione	000087-90-1

**TSCA STATUS:** All ingredients in this mixture are in compliance with TSCA.

**FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT):** This is an EPA-registered product.

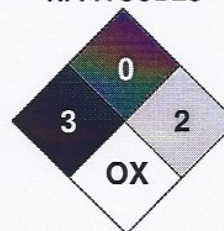
### 16. OTHER INFORMATION

**REVISION SUMMARY:** Revision #: 2. This MSDS replaces the June 13, 2008 MSDS.

#### HMIS RATING

HEALTH:	3
FLAMMABILITY:	0
PHYSICAL HAZARD:	2
PERSONAL PROTECTION:	

#### NFPA CODES



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