

1. Product and Company Identification

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| Product Name: | Mineraluxe™ Hot Tub Sanitizer Chlorinating Tablets |
| CAS #: | 87-90-1 |
| Product Use: | For disinfectant, sanitizers, bactericides and algacides for spas and hot tubs |
| Supplier: | Mineraluxe™ c/o. Backyard Brands, Inc. 401 S. Enterprise Blvd. Lebanon, IN 46052 USA – 1-866-875-0012 |
| Chemical name | Trichloro-s-triazinetrione |
| Synonym(s) | Trichloroisocyanuric Acid; TCCA; Trichlor; Trichloro-s-triazinetrione; Symclosene |
| Chemical formula | C ₃ Cl ₃ N ₃ O ₃ |
| Chemical family | Chloroisocyanurate |
| Molecular weight | 232.41 |

24 HR. EMERGENCY TELEPHONE NUMBERS
Poison Control Center (Medical): (800) 420-9236
CANUTEC (Canadian Transportation): (613) 996 - 6666
CHEMTREC (US Transportation): (800) 424 – 9300.

2. Hazards identification

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| GHS classification | Ox. Sol. 2 H272, May intensify fire; oxidizer. Acute Tox. 4, H302 Harmful if swallowed Eye Irrit. 2, H319 Causes serious eye irritation USA: Eye Irrit. 2A, Causes serious eye irritation STOT SE 3, H335 May cause respiratory irritation Aquatic Acute 1, H400 - Very toxic to aquatic life Aquatic Chronic 1, H410 - Very toxic to aquatic life with long lasting effects |
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Symbol(s)



Signal Word

DANGER

Hazard statements

H272 - May intensify fire; oxidizer
 H302 - Harmful if swallowed
 H319 - Causes serious eye irritation
 H335 - May cause respiratory irritation
 H410 - Very toxic to aquatic life with long lasting effects
 EUH031 - Contact with acids liberates toxic gas

Precautionary statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 P221 - Take any precaution to avoid mixing with combustibles/other chemicals
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P273 - Avoid release to the environment
 P391 - Collect spillage
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P330 - Rinse mouth
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/attention.
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell
 P220 - Keep/Store away from clothing/ combustible materials
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P271 - Use only outdoors or in a well-ventilated area
 P370 + P378 - In case of fire: Use water for extinction
 P405 - Store locked up
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
 P501 - Dispose of contents/container in accordance with national and international regulations

Potential environmental effects: Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

NFPA Ratings (Scale 0-4)

Health = 3, Fire = 0, Reactivity = 2. Special Hazard Warning: OXIDIZER.

HMIS Ratings (Scale 0-4)

Health = 3, Fire = 0, Reactivity = 2

3. Composition / Information on ingredients

| Components | CAS No. | Weight % |
|---------------------------|---------|----------|
| Trichloroisocyanuric Acid | 87-90-1 | 99 |

4. First Aid Measures

Eye contact

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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| Inhalation | Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. |
| Ingestion | Call poison control center, or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. |
| Most important symptoms and effects, acute or delayed | |
| - Eye Contact | Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage. |
| - Skin contact | Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Repeated skin exposure may cause tissue destruction due to the corrosive nature of the product. |
| - Inhalation | Irritating to the nose, mouth, throat and lungs. It may also cause burns to the respiratory tract with the production of lung edema that can result in shortness of breath, wheezing, choking, chest pain, and impairment of lung function. Inhalation of high concentrations can result in permanent lung damage from the corrosive action of the lung. |
| Ingestion | Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Ingestion causes severe damage to the gastrointestinal tract with the potential to cause perforation. |
| Note to physician | Probable mucosal damage may contraindicate the use of gastric lavage. Corrosive No specific antidote. In case of ingestion DO NOT induce vomiting. Treat symptomatically and supportively. |
| Medical conditions aggravated by exposure | Asthma, respiratory and cardiovascular diseases. |

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| 5. Fire - fighting measures |
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| Suitable extinguishing media | Water. Large amounts of water may be needed and the flow of water should not be stopped until the fire/reaction has stopped. |
| Extinguishing media not to be used | Do not use dry chemical extinguisher containing ammonia compounds. |
| Unusual fire and explosion hazards | When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, chlorine, nitrous oxides, cyanates, carbon monoxide and carbon dioxide. |
| Fire fighting procedure | Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished. |

6. Accidental Release Measures

Personal precautions

For small spills in a well-ventilated areas, wear a NIOSH approved half-face or full face tight fitting respirator or a loose fitting powered air purifying respirator equipped with chlorine cartridges. Chemical goggles should be worn when using a half-face respirator. In addition to respiratory protection, wear coveralls, chemical resistant gloves, chemical resistant footwear; and chemical resistant headgear for overhead exposure. For clean-up of large spills, or small dry spills in confined areas, wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator. Additionally, body protection should be impervious clothing covering entire body to prevent personal contact with material. CAUTION - Protection concerns must also address the following: If this material becomes damp/wet or contaminated in a container, the formation of nitrogen trichloride gas may occur and an explosive condition may exist.

Environmental precautions

Prevent entry into sewers and watercourses.

Methods for cleaning up

Hazardous concentrations in air may be found in local spill area and immediately downwind. If spill material is still dry, do not put water directly on this product as a gas evolution may occur.

Environmental precautions

Prevent entry into sewers and watercourses

- Soil

Do not contaminate spill material with any organic materials, ammonia, ammonium salts or urea. Clean up all spill material with clean, dry dedicated equipment and place in a clean dry container.

- Water

This material is heavier than and soluble in water. Stop flow of material into water as soon as possible. Begin monitoring for available chlorine and pH immediately.

- Air

Vapors may be suppressed by the use of water fog.

7. Handling and storage

Handling

Avoid bodily contact. Do not take internally. Upon contact with skin or eyes, wash off with water.

Storage

Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid"). Product has an indefinite shelf-life limitation. Do not store at temperatures above 60°C/140°F. Available chlorine loss can be as little as 0.1% per year at ambient temperatures.

8. Exposure Controls / Personal Protection

Exposure Limits :

| Components | ACGIH-TLV Data | OSHA (PEL) Data |
|--------------------------------------|----------------|-----------------|
| Trichloroisocyanuric Acid 87-90-1 | Not determined | Not determined |

Ventilation requirements

Use local exhaust ventilation to minimize dust and chlorine levels where industrial use occurs. Otherwise, ensure good general ventilation.

Personal protective equipment:

- **Respiratory protection** When dusty conditions are encountered, wear a NIOSH/OSHA full-face respirator with chlorine cartridges for protection against chlorine gas and dust/mist pre-filter.
- **Hand protection** Neoprene gloves
- **Eye protection** Use chemical safety glasses to avoid eye contact. Where industrial use occurs, chemical goggles may be required.
- **Skin and body protection** Body covering clothes and boots

Hygiene measures

Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

9. Physical and Chemical Properties

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| Appearance | Tablet-form product |
| Odor | Sharp, chlorine-like bleach odor |
| Odor threshold | Not determined |
| pH | 2.7-2.9 (1% solution) |
| Melting point/range | 225-230°C (decomposes) |
| Boiling point/range | Not applicable (decomposes) |
| Flash point | Not applicable |
| Evaporation rate (ether=1) | Not applicable under standard conditions |
| Vapor pressure | Not applicable under standard conditions |
| Vapor density | Not applicable under standard conditions |
| Solubility: | |
| - Solubility in water | 1.2 g/100ml at 25°C |
| - Solubility in other solvents | Not available |
| Auto-ignition temperature | Not applicable |
| Decomposition temperature | 225 °C (437°F) |
| Viscosity | No data |
| available | |
| Bulk density | Granular - 0.89-1.1 g/cc Tablet - 1.16-1.9 g/cc |
| Specific gravity | >1 |
| Explosive properties | Not available |
| Oxidizing properties | Oxidizer |
| Particle size | Not available |

10. Stability and Reactivity

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| Reactivity | Contact with small amounts of water may result in an exothermic reaction with the liberation of toxic fumes. |
| Stability | Stable under normal conditions |
| Possibility of hazardous reactions | Decomposes when heated, releasing poisonous and corrosive fumes. |

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| Conditions to avoid | Heating above 225°C (437°F). |
| Materials to avoid | Do not package in paper or cardboard. Organic materials, reducing agents, nitrogen containing materials, other oxidizers, acids, bases, oils, grease, sawdust, dry fire extinguishers containing monoammonium compounds. |
| Hazardous decomposition products | Nitrogen trichloride, chlorine, nitrous oxides, cyanates, carbon monoxide, carbon dioxide. |

11. Toxicological information

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| Likely Routes of Exposure | Skin Inhalation Eye contact Ingestion |
| Acute toxicity: | |
| - Rat oral LD50 | 809 mg/kg |
| - Rabbit dermal LD50 | >2000 mg/kg |
| - Eye irritation (rabbit) | Corrosive |
| - Dermal irritation (rabbit) | Corrosive |
| Dermal sensitization | Not a sensitizer |
| Chronic toxicity | Prolonged exposure may cause damage to the respiratory system. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. |
| Mutagenicity | Not mutagenic in five Salmonella strains and one E.coli strain with or without mammalian microsomal activation. |
| Carcinogenicity | Not classified by IARC, OSHA, EPA. Not included in NTP 12th Report on Carcinogens |
| Reproductive toxicity | There are no known or reported effects on reproductive function or fetal development. Toxicological investigation indicates it does not affect reproductive function or fetal development. |

12. Ecological information

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| Aquatic toxicity : | |
| - 96 Hour-LC50, Fish | 0.32 mg/l (Rainbow trout) 0.30 mg/l (bluegill sunfish) |
| - 48 hour-LC50, Daphnia magna | 0.21 mg/l |

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| Avian toxicity: | |
| - Oral LD50, Mallard duck | 1600 mg/kg |
| - Dietary LC50, Mallard duck | >10,000 ppm |
| - Dietary LC50, Bobwhite quail | 7422 ppm |
| Persistence and degradability | Expected to biodegrade (Lit.) |
| Bioaccumulative potential | Not expected to bioaccumulate (Lit.) |
| Mobility in Soil | Expected to be highly mobile in sol (Lit.) |
| Germany, water endangering Classes (WGK) | 3 |

13. Disposal Considerations

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| Waste disposal | Observe all federal, state and local environmental regulations when disposing of this material. If this product becomes waste, it will be a hazardous waste that is subject to the Land Disposal Restrictions under 40 CFR 268 and must be managed accordingly. Care must be taken to prevent environmental contamination from the use of this material. |
| Disposal of Packaging | Empty containers should be disposed of in accordance with all applicable laws and regulations |

14. Transportation information

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| UN No. | 2468 |
| DOT | Proper shipping name: Trichloroisocyanuric Acid Dry Class: 5.1 - Oxidizing substances Label: Oxidizing substances (5.1) Packing Group: II Emergency Guide No.140 Note: Certain shipping modes or package sizes may have exceptions from the transport regulations and may be classified as Consumer Commodity and Limited Quantity. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes. |
| IMDG | Proper shipping name: Trichloroisocyanuric Acid Dry Class: 5.1 - Oxidizing substances Label: Oxidizing substances (5.1) Packing Group: II Mark: MARINE POLLUTANT |
| ICAO/IATA | Proper shipping name: Trichloroisocyanuric Acid Dry Label: Oxidizing substances (5.1) Class: 5.1 Packing group: II Marking: Environmentally hazardous substance |

15. Regulatory Information

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| USA | Reported in the EPA TSCA Inventory. This product is registered under FIFRA |
| - EPA Registration no. | 69470-26-90605 |
| - Emergency overview in accordance to EPA Master Label | DANGER Hazards to humans and domestic animals Highly corrosive Causes irreversible eye damage and skin burns May be fatal if absorbed through skin or inhaled Strong oxidizing agent This pesticide is toxic to fish and aquatic organisms. |
| - SARA (311, 312) | This product is categorized as an immediate health hazard, and fire and reactivity physical hazard This product does not contain a chemical listed at or above de minimis concentrations |
| - Massachusetts Right-to-Know Hazardous Substances list | Listed |
| - New Jersey Right-to-Know Hazardous Substances list | Listed |
| - Pennsylvania Right-to-Know Hazardous Substances list | Listed |
| - Waste Classifications | If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001. |
| - Workplace Classification | This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200) |
| Canada | Listed in DSL |
| -WHMIS hazard class | C oxidizing materials D1B Toxic material causing immediate and serious toxic effects D2B Toxic materials causing other toxic effects |
| EU | Reported in EINECS |
| EC No | 201-782-8 |
| Japan | ENCS no. 5-1044 ISHL no. 5-1044 |
| Australia | Listed in AICS |
| New Zealand Inventory | Listed in NZIoC |
| China | |
| - China inventory | Listed in IECSC |
| Mexico | Listed in the National Inventory of Chemical Substances (INSQ). |

Korea
Philippines

Listed in the Korea Existing Chemicals Inventory (KECI), number KE-34101
Listed in PICCS

16. Other information

This data sheet contains changes from the previous version in sections(s)

1, 2, 6, 12 and 15

COMMENTS: The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard, National Fire Protection Association (NFPA), Hazardous Materials Identification System (HMIS), and Canada's Workplace Hazardous Information System (WHMIS) and Environmental Protection Agency (CEPA).

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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| Prepared by | Backyard Brands, 1-866-875-0012 |