



SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Product name Green Klean Chlorinated Disinfecting Crystals
Product id AS_9717BT_GK
Revision date 14/07/2014

Revision: 1

1. Identification of the substance & the company

Chemical name DICHLOROISOCYANURIC ACID, SODIUM SALT OF
Synonym(s) Effervescent NaDCC Tablets, Sodium Dichloro-s-Triazinetrione
Type of product and use Multi-purpose product including bleaching, cleaning, and deodorizing.
Supplier **SOP Green Klean**
615 Industrial Dr, Ste D
Cary, IL 60013
USA
Phone Number 815-479-0460
Emergency Telephone Medical: (800) 420-9236
Chemtrec: (800) 424-9300

2. Hazards identification

GHS classification Eye Irrit. 2, H319 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



Signal Word WARNING

Hazard statements 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



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Precautionary statements

- P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 - Wash hands thoroughly after handling
- P271 - Avoid use in a confined area
- P273 - Avoid release to the environment
- 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
- P391 - Collect spillage
- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P405 - Store locked up
- P501 - Dispose of contents/container in accordance with national and international regulations

3. Composition / information on ingredients

Components	CAS No.	Weight %
DICHLOROISOCYANURIC ACID, SODIUM SALT OF	2893-78-9	30-62.5
ADIPIC ACID	124-04-9	10-35
SODIUM BICARBONATE	144-55-8	21.44-22.76
SODIUM CARBONATE	497-19-8	2-12

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.

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.



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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 This material is corrosive to the eye. Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The degree of injury depends on the concentration and duration of contact.

- Skin contact Direct contact with wet material or moist skin may cause severe irritation, pain, and possibly burns. Dry material is less irritating than wet material. This material is not a skin sensitizer based on studies with guinea pigs.

- Inhalation This material contained in this tablet in solid form is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction for the tablet active ingredient is typically less than 0.1% by weight for the granular and extra granular grades. If it is ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. If significant or prolonged exposure occurs, pulmonary oedema may develop, either immediately or more often within a period of 5-72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis, and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure. Severe cases may be fatal.

- Ingestion Not a likely route of exposure. Harmful if swallowed. Ingestion may cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the oesophagus and gastrointestinal tract may range from irritation to severe corrosion. Oedema of the epiglottis and shock may occur

Note to physician No specific antidote.
Treat symptomatically and supportively.
Probable mucosal damage may contraindicate the use of gastric lavage.

Medical conditions aggravated by exposure Eye disorders, respiratory disorders, skin disorders and allergies



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5. Fire - fighting measures

- Suitable extinguishing media** 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** Avoid using dry chemicals, carbon dioxide or halogenated extinguishing agents.
- Unusual fire and explosion hazards** When heated to decomposition, may release poisonous and corrosive fumes of nitrogen trichloride, nitrogen, cyanogen chloride, phosgene, chlorine and CO.
- 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** Avoid contact with skin, eyes and clothing. Chemical safety goggles Chemical resistant gloves
- 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. Do not close containers containing wet or damp material. Do not transport damp or wet material.
- Environmental precautions** Prevent flow of material into water source and begin monitoring available chlorine and pH immediately.
- **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.



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7. Handling and storage

Handling Avoid contact with skin, eyes, and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing the substance. Use respiratory protection when exposure is possible. Vapour space in a closed container may contain a slight amount of chlorine gas and compounds from decomposition of the product.

Storage Store in a dry, cool (< 25°C), well ventilated area away from incompatible materials (see "materials to avoid"). Do not allow water to get into the container

8. Exposure controls / personal protection

Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
DICHLOROISOCYANURIC ACID, SODIUM SALT OF 2893-78-9	Not determined	Not determined
ADIPIC ACID 124-04-9	5 mg/m ³	Not determined
SODIUM BICARBONATE 144-55-8	Not determined	Not determined
SODIUM CARBONATE 497-19-8	Not determined	Not determined

Ventilation requirements This material should be handled in a well-ventilated area. Use local exhaust as necessary, especially under dusty conditions.

Personal protective equipment:

- **Respiratory protection** In case of insufficient ventilation wear suitable respiratory equipment.
- **Hand protection** Chemical resistant gloves, PVC or nitrile recommended
- **Eye protection** Chemical safety goggles
- **Skin and body protection** Use protective clothing impervious to this material.

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

Appearance White to off white tablets
Odor Slight chlorine.
pH 5-6



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Boiling point/range	Not applicable
Flash point	Not applicable
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammability (solid, gas)	Not flammable
Vapor pressure	Not applicable under standard conditions
Vapor density	Not applicable under standard conditions
Solubility:	
- Solubility in water	Completely miscible
Partition coefficient (n-octanol/water)	Log Kow - 0
Auto-ignition temperature	Not applicable
Decomposition temperature	225-250°C (437-482°F)

10. Stability and reactivity

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	Contact with acid liberates toxic gases. If heated by outside source to temperatures above 240°C (464°F), this product will undergo decomposition with the evolution of noxious gases.
Conditions to avoid	Heating above decomposition temperature. Contamination with moisture, organic matter or other chemicals may start a chemical reaction with generation of heat, liberation of hazardous gases, and possible generation of fire and explosion.
Materials to avoid	Strong acids and/or alkalines. Reducing agents. Combustible material. The active ingredient in this preparation is a strong oxidising agent. The preparation of concentrated solutions or slurries is not recommended. Avoid contact with water on concentrated material in the container. Also avoid contact with easily oxidisable organic material: ammonia, urea or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite and alkalis.
Hazardous decomposition products	Nitrogen trichloride, nitrogen, cyanogen chloride, phosgene, chlorine and CO.

11. Toxicological information

Note: *The toxicological data refer only to the active ingredient unless otherwise specified*

Acute toxicity:

- Rat oral LD50 >2000 mg/kg (the product as a whole)



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Revision date 14/07/2014

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- Rabbit dermal LD50	>5000 mg/kg
- Rat inhalation LC50	0.27-1.17 mg/L/4h
- Dermal irritation (rabbit)	Moderate irritant
- Eye irritation (rabbit)	Severe irritant
Dermal sensitization	Not a sensitizer
Chronic toxicity	Chronic inhalation exposure may cause impairment of lung function and permanent lung damage. Based on animal studies, exposure to concentrations of monosodium cyanurate at the solubility limit may cause cardiovascular, kidney and urinary bladder effects.
Mutagenicity	Not mutagenic by the Ames Test.
Carcinogenicity	Not known to be a carcinogen. Not classified by IARC, OSHA, EPA. Not included in NTP 13th Report on Carcinogens
Reproductive toxicity	No data available

12. Ecological information

Note: The environmental toxicity data mentioned below are from studies conducted on the active ingredient.

Aquatic toxicity :

- 96 Hour-LC50, Fish	0.13-0.36 mg/l (Rainbow trout) 0.25-1.0 mg/l (Bluegill sunfish) 1.21 mg/l (Inland silverside)
- 96 Hour-EC50, Marine Invertebrate	1.65 mg/l (96h, Mysid shrimp)
- 48 Hour-EC50, Marine Invertebrate	0.196 mg/l (Water flea)
Avian toxicity:	
- Oral LD50, Bobwhite quail	1732 mg/kg
- Oral LD50, Mallard duck	1916 mg/kg
- Dietary LC50, Mallard duck	>10,000 ppm
- Dietary LC50, Bobwhite quail	10,000 ppm



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Persistence and degradability The materials used in this preparation will not persist in the environment. The free available chlorine from Sodium dichloroisocyanurate is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid. Sodium Dichloroisocyanurate is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.

Bioaccumulative potential Trichloroisocyanuric acid hydrolyses in water liberating chlorine and cyanuric acid. These products are not bioaccumulative

Note: Not considered to be PBT or vPvB

13. Disposal considerations

Waste disposal Avoid access to streams, lakes or ponds. Observe all federal, state and local environmental regulations when disposing of this material. Do not transport damp or wet material. Neutralise materials to a non-oxidising state for safe disposal.

Disposal of Packaging Clean Container and dispose of according to local and national regulations

14. Transportation information

Independent tests, carried out by TNO Prins Maurits Laboratory, conducted according to the procedure as described in the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, third revised edition, test O.1. have demonstrated that the product is not oxidizing for transport

DOT Not regulated for non bulk shipments
For bulk shipments regulated as:
UN No. 3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s (contains Sodium dichloro-s-triazinetrione)
Class: 9 - Miscellaneous Hazardous Material
Packing Group: III
Label: 9
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.



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15. Regulatory information

USA
All the ingredients in this preparation are listed in the EPA TSCA Inventory. This product is registered under FIFRA

- EPA Registration no. 69470-37-91038

- Emergency overview in accordance to EPA Master Label **DANGER**
Corrosive
Causes irreversible eye damage
Harmful if swallowed, inhaled or absorbed through the skin
Strong oxidizing agent

CERCLA/SARA - 302 ext. haz. substances
This material contains hazardous substance (Adipic Acid) as defined by CERCLA/SARA and the Reportable Quantity (RQ) is 5000 lbs.

- SARA (311, 312)
This product is categorized as an immediate health hazard, and fire and reactivity physical hazard (Sodium dichloroisocyanurate)

- Massachusetts Right-to-Know Hazardous Substances list Listed (Adipic Acid, Sodium dichloroisocyanurate)

- New Jersey Right-to-Know Hazardous Substances list Listed (Adipic Acid, Sodium dichloroisocyanurate)

- Pennsylvania Right-to-Know Hazardous Substances list Listed (Adipic Acid, Sodium dichloroisocyanurate)

- Rhode Island Right-to-Know Hazardous Substances list Listed (Adipic Acid, Sodium dichloroisocyanurate)

Canada
Listed in DSL

WHMIS hazard class
For Sodium dichloroisocyanurate:
C oxidizing materials
D1B Toxic material causing immediate and serious toxic effects
D2B Toxic materials causing other toxic effects

For Sodium Carbonate:
E corrosive material
D2B Toxic materials causing other toxic effects

EU
All ingredients are reported in EINECS



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16. Other information

All sections reformatted in accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, SOP Green Klean makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will SOP Green Klean be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. **NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANT ABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.**

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End of safety data sheet