

# PROtech SAFETY DATA SHEET

## 1. PRODUCT IDENTIFICATION

Product Name: DY-CHLOR II  
Synonym(s): Sodium dichloroisocyanurate dihydrate; Sodium dichloro-s-triazinetrione dihydrate; Dichlor dihydrate; 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione; Troclosene sodium; dihydrate; SDCC dihydrate; NaDCC dihydrate; Dichloroisocyanuric acid sodium salt.  
Recommended Uses: Disinfectant, Sanitizer, Bactericide and Algaecide  
SDS Reference: 53  
Company Information: ALLCHEM PERFORMANCE PRODUCTS, INC. Distributed By: WINDO  
6010 NW FIRST PLACE 6934 EAST FIRST AVENUE SUITE 101  
GAINESVILLE, FL 32607 SCOTTSDALE AZ 85251  
Tel: 352-378-9696  
24 HOUR EMERGENCY NUMBER: INFOTRAC (TRANSPORTATION): 1-800-535-5053

## 2. HAZARD(S) IDENTIFICATION

Classification: CORROSIVE  
FATAL IF INHALED  
HARMFUL IF SWALLOWED  
TARGET ORGAN TOXICITY (SINGLE)  
ENVIRONMENTAL HAZARD



Signal Word: DANGER

Hazard Statements: HEALTH HAZARDS:  
Skin Corrosion/Irritant: Causes severe skin burns and eye damage - Category 1C  
Eye Damage/Irritation: Causes serious eye damage - Category 1  
Inhalation Toxicity: Fatal if inhaled - Category 2  
Oral Toxicity: Harmful if swallowed - Category 4  
Target Organ Toxicity (single exposure) May cause respiratory tract irritation - Category 3  
ENVIRONMENTAL HAZARD:  
Very toxic to aquatic organisms. Very toxic to aquatic life with long lasting effects.

Precautionary Statements: Do not breathe dust, fume, gas, mist, vapors, or spray. In case of inadequate ventilation, wear respiratory protection. Wear protective gloves, protective clothing, eye, and face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Keep container tightly closed and store locked up. Avoid release to the environment.  
ADDITIONAL HAZARD INFORMATION: This material is corrosive. Product has strong buffering capability. Use dilution. May cause burns to moist skin if not promptly removed. There is no specific antidote.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact: Remove/Take off Immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Specific treatment is urgent (see Section 4 of SDS or first aid information on this label).

Ingestion: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Specific treatment (see First Aid information on product label and/or Section 4 of the SDS).

Hazards Not Otherwise Classified (HNOC):  
Damp or wet material may generate nitrogen trichloride, an explosion hazard.  
Contact with acids liberates toxic gas.

## 3. COMPOSITION

	PERCENT %	CAS #
Chemical Name: Sodium Dichloroisocyanurate, Dihydrate	98 - 100	51580-86-0
Sodium Chloride	0.1 - 1	7647-14-5

## 4. FIRST AID

If In Eyes: Immediately flush contaminated eyes with a directed stream of water for as long as possible. Remove contact lenses, if present, then continue rinsing. GET MEDICAL ATTENTION IMMEDIATELY.  
If on Skin or Clothing: Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes

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immediately. Wash contaminated areas with soap and water. GET MEDICAL ATTENTION. Thoroughly clean and dry contaminated clothing and shoes before reuse.

If Inhaled: If inhalation of dust occurs and adverse effects result, remove to uncontaminated area. Evaluate ABC's (is Airway constricted, is Breathing occurring, and is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY. There is no specific antidote, treat symptomatically.

If Swallowed: If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

Note: Probable mucosal damage may contraindicate the use of gastric lavage.  
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  
Acute Symptoms/Effects: Listed below.  
Inhalation (Breathing): Respiratory System Effects: Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.  
Skin: Skin Corrosion. Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns.  
Eye: Serious Eye Damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.  
Ingestion (Swallowing): Gastrointestinal Effects: Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.  
Delayed Symptoms/Effects:  
- Repeated and prolonged skin contact may cause a dermatitis.  
Notes to Physician: Treat as a corrosive substance. This material is more irritating to the skin and eyes in the presence of water. For prolonged exposures and significant exposures, consider delayed injury to exposed tissues. There is no antidote. Cyanuric acid is readily removed from the body via the renal system, and is not bioaccumulated. Treatment is supportive care. Follow normal parameters for airway, breathing, and circulation.

## **5. FIREFIGHTING MEASURES**

Suitable / Unsuitable Extinguishing Media: Flood with water. Do not use ABC fire extinguishers. Do not use dry chemicals, carbon dioxide, or halogenated extinguishing agents.

Specific Hazards from Chemical: Negligible fire hazard. If heated by outside source to temperatures above 240°C (464°F), this product will undergo decomposition with the evolution of noxious gases but no visible flame. Wet material may generate nitrogen trichloride, an explosion hazard. This product is an NFPA Class 1 Oxidizer.  
Fire Fighting: Consider evacuation of personnel located downwind. Keep unnecessary people away, isolate hazard area and deny entry. Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Containers which appear undamaged, except for being damp on the outside, should be opened and inspected immediately. DO NOT attempt to reseal contaminated drums. Damp material should be neutralized to a non-oxidizing state.

Special Protective Equipment: Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode.

Other Information: Hazardous Combustion Products: Chlorine, Nitrogen, Nitrogen trichloride, Cyanogen chloride, Oxides of carbon, Phosgene.

## **6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions: Keep unnecessary and unprotected persons away. Isolate hazard area and deny entry. Do not get in eyes, on skin or on clothing. Do not breathe dust, fume, gas, mist, vapors, or spray. Wear appropriate personal protective equipment recommended in Section 8, Exposure Controls / Personal Protection, of the SDS.

Methods and Materials for cleanup: DO NOT add water to spilled material. DO NOT use floor sweeping compounds to clean up spills. Sweep and scoop spilled material into clean, dedicated equipment. Every attempt should be made to avoid mixing spilled material with other chemicals or debris when cleaning up. DO NOT attempt to reseal contaminated drums. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state.  
Environmental Precautions: This material is very toxic to aquatic life. This material is very toxic to aquatic life with long lasting effects. Keep out of water supplies and sewers. Releases should be reported, if required, to appropriate agencies.

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## 7. HANDLING AND STORAGE

**Handling:** Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or dust when opening container. Avoid creation of dust. Wash thoroughly after handling. Wear personal protective equipment as described in Exposure Controls/Personal Protection (Section 8) of the SDS. NEVER add water to this product. Always add product to large quantities of water. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products.

**Storage:** Store in original container and in a dry area where temperatures do not exceed 52°C (125°F) for 24 hours. Store and handle in accordance with all current regulations and standards. Do not allow water to get in container. If liner is present, tie after each use. Keep container tightly closed and properly labeled. Store containers on pallets. Keep away from food, drink and animal feed. Keep separated from incompatible substances (see Section 10 of the Safety Data Sheet).  
(NFPA Oxidizer Class 1)

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTIONS

**OSHA permissible exposure limit:** Regulatory Exposure Limit(s): None. This product does not contain any components that have regulatory occupational exposure limits (OEL's) established.  
OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit  
NON-REGULATORY EXPOSURE LIMIT(S): None. This product does not contain any components that have advisory (non-regulatory) occupational exposure limits (OEL's).  
- The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown, are the Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).  
- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.  
Additional Advice: Chlorine and chlorine compounds may be found in slight amounts in the head space of containers of this product.

**Appropriate Engineering Controls:** Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

**Individual Protection Measures:** Eye Protection: Wear chemical safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.  
Skin and Body Protection: Wear protective clothing to minimize skin contact. When potential for contact with dry material exists, wear disposable coveralls suitable for dust exposure, such as Tyvek®. Contaminated clothing should be removed and laundered before reuse.  
Hand Protection: Wear appropriate chemical resistant gloves. Consult a glove manufacturer for assistance in selecting an appropriate chemical resistant glove.  
Protective Material Types: Butyl rubber, Natural rubber, Neoprene, Nitrile, Polyvinyl chloride (PVC), Tyvek®.  
Respiratory Protection: A NIOSH approved respirator with N95 (dust, fume, mist) cartridges may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. The added protection of a full face piece respirator is required when visible dusty conditions are encountered and eye irritation may occur. Acid gas cartridges with N95 filters are required when fumes or vapor may be generated. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White Granules, Crystals	Flammability (solid/gas):	Not Flammable
Odor:	Slight chlorine-like	Upper/lower Flammability or Exposure limits:	Not Flammable
Odor Threshold:	No data available	Vapor Pressure:	No data available
pH:	6-7 @ 25°C (1% solution)	Vapor Density:	Not Applicable
Melting Point/Freezing Point:	Decomposes without melting @ 252°C	Density:	56 - 60 lbs/ft <sup>3</sup>
Initial Boiling Point/Boiling Range:	Not Applicable	Solubility(ies):	26.5 g/100 g @ 25°C
		Partition Coefficient: n-octanol/water:	Kow = 0
		Auto-ignition Temperature:	Not determined

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Flash Point: Not Applicable

Decomposition Temperature: 486°F (252°C) - dehydrates at 104 - 212°F (40 - 100°C)

Evaporation Rate: Not Applicable

Viscosity: Not Applicable

## **10. STABILITY AND REACTIVITY**

Stability/Reactivity: Stable under normal temperatures and pressures. NPFA Class 1 Oxidizer.

Possibilities of Hazardous Reactions: Hazardous Polymerization: Will Not Occur.

Conditions to Avoid: None known.

Incompatible Materials: Acids, ammonia, bases, floor sweeping compounds, calcium hypochlorite, reducing agents, organic solvents and compounds.

Hazardous Decomposition Materials: Nitrogen, nitrogen trichloride, cyanogen chloride, oxides of carbon, phosgene.

## **11. TOXICOLOGICAL INFORMATION**

Acute Toxicity: PRODUCT TOXICITY:  
Oral LD50 (Rat): Sodium dichloroisocyanurate dihydrate: 1823 mg/kg (Rat)  
Rabbit dermal LD50: Sodium dichloroisocyanurate dihydrate: >2000 mg/kg (Rabbit)  
Inhalation LC50 (rat): Sodium dichloroisocyanurate dihydrate: 0.27 mg/l - 1.17 mg/l (4 hr Rat)

IRRITATION DATA:  
PRIMARY SKIN IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)  
PRIMARY EYE IRRITATION: Severe Irritation, Corrosive (rabbit, 24 hr)

COMPONENT TOXICITY  
Oral LD50 (rat)  
Sodium dichloroisocyanurate dihydrate: 735 mg/kg (Rat)  
Sodium Chloride: 3 g/kg (Rat)

Rabbit dermal LD50:  
Sodium dichloroisocyanurate dihydrate: 2000 mg/kg (Rabbit)  
Sodium Chloride: 10 g/kg (Rabbit)

Inhalation LC50 (rat):  
Sodium dichloroisocyanurate dihydrate: 50 mg/l (4 hr Rat)  
Sodium Chloride: 42 g/m<sup>3</sup> (1 hr Rat)

POTENTIAL HEALTH EFFECTS:  
Eye contact: Eye exposures may cause burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of eye.  
Skin contact: Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree 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 in the form as sold is not expected to produce respiratory effects. Particles of respirable size are generally not encountered. The respirable fraction is typically less than 0.1% by weight for the granular and extra granular grades. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.  
Ingestion: Exposure by ingestion may cause irritation, nausea, and vomiting. May cause local tissue damage to epiglottis, mucus membranes of the mouth, esophagus and stomach such as burning, inflammation, local ulceration, and may cause gastrointestinal bleeding.  
Chronic Effects: None identified for the parent chemical. Based on animal studies, exposure to concentrations of monosodium cyanurate at the solubility limit may cause cardiovascular, kidney and urinary bladder effects.

### **SIGNS AND SYMPTOMS OF EXPOSURE:**

Inhalation (Breathing): Respiratory System Effects: Exposure to the solid product or to free chlorine evolving from the product may cause irritation, redness of upper and lower airways, coughing, laryngospasm and edema, shortness of breath, bronchoconstriction, and possible pulmonary edema. The pulmonary edema may develop several hours after a severe acute exposure.

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Skin: Skin Corrosion. Exposure to solid along with moisture may cause redness, irritation, burning sensation, swelling, blister formation, first, second, or third degree burns.

Chronic Toxicity: Monosodium cyanurate was administered via drinking water to rats for 104 weeks at concentrations of 0, 400, 1200, 2400, and 5375 ppm (solubility limit). No compound-related effects on body weights, clinical signs of toxicity or food or water consumption were noted during the study. An increased incidence of gross lesions in the urinary tract, calculi in the kidney and lesions in the heart were observed in males receiving the highest dose level of 5375 ppm (solubility limit). The health effects seen in this study were due to precipitation of the test substance in the urinary tract when the test substance was fed at the solubility limit. Adverse health effects were not seen at lower doses where precipitation did not occur.

Reproductive Toxicity: Not classified as a reproductive toxin per GHS criteria. There are no known or recorded effects on reproductive function or fetal development.

Carcinogenicity: This product is not classified as a carcinogen by NTP, IARC or OSHA.

Mutagenicity: Not classified as a mutagen per GHS criteria. Not mutagenic in 5 Salmonella strains and 1 E. coli strain with or without mammalian microsomal activation.

## **12. ECOLOGICAL INFORMATION**

Aquatic Toxicity: Fish Toxicity:  
LC50 Bluegill sunfish: 0.25-1.0 mg/L (96 hour)  
LC50 Rainbow trout: 0.13-0.36 mg/L (96 hour)  
LC50 Inland silversides: 1.21 mg/L (96 hour)  
Invertebrate Toxicity:  
LC50 Water flea: 0.196 mg/L (48 hour)  
LC50 Mysid shrimp: 1.65 mg/L (96 hour)

Avian Toxicity: Avian Toxicity:  
LD50 Mallard duck (oral): 1,916 mg/kg  
LD50 N. Bobwhite Quail (oral): 1,732 mg/kg  
LD50 Mallard duck (diet): >10,000 ppm  
LD50 N. Bobwhite Quail (diet): >10,000 ppm

Environmental Hazards: BIODEGRADATION: This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.  
PERSISTENCE: This material is believed not to persist in the environment. Free available chlorine is rapidly consumed by reaction with organic and inorganic materials to produce chloride ion. The stable degradation products are chloride ion and cyanuric acid.  
BIOCONCENTRATION: This material hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative.  
This product is toxic to fish and aquatic organisms.  
ADDITIONAL ECOLOGICAL INFORMATION: This product is very toxic to fish and aquatic organisms. This product is very toxic to aquatic life with long lasting effects. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## **13. DISPOSAL CONSIDERATIONS**

Disposal: Use or reuse if possible. Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state. Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.  
Container Disposal: See product label for container disposal information. May be subject to disposal regulations.

## **14. TRANSPORTATION INFORMATION**

Package exceptions may be applicable. Refer to the appropriate IMDG, IATA and/or 49 CFR regulations accordingly.

DOT: Non Bulk Packaging is not Regulated by DOT (less than 400 kg) ; if transported by Bulk Packaging or Shipment by Vessel then regulated

## **15. REGULATORY INFORMATION**

TSCA: USA: Reported in the EPA TSCA Inventory or are exempt.

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SARA (311, 312): Fire Hazard, Reactive Hazard, Acute Health Hazard  
SARA 313: Not regulated.  
Right To Know Hazardous Substance List: California Proposition 65: This product is not listed  
Massachusetts Right to Know Hazardous Substance List Listed  
New Jersey Right to Know Hazardous Substance List: 1694  
New Jersey Special Health Hazards Substance List Not Listed  
New Jersey - Environmental Hazardous Substance List Not Listed  
Pennsylvania Right to Know Hazardous Substance List Listed  
Pennsylvania Right to Know Special Hazardous Substances Not Listed  
Pennsylvania Right to Know Environmental Hazard List Not Listed  
Rhode Island Right to Know Hazardous Substance List Listed  
Waste Classification: No data available.  
Workplace Classification: This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).  
CERCLA Reportable: Not applicable.  
Quantity:

EPA NOTES: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. The pesticide label also includes other important information, including directions for use. Following is the hazard information as required on the pesticide label:

SIGNAL WORD: DANGER

PRECAUTIONARY STATEMENTS. HAZARDS TO HUMANS AND DOMESTIC ANIMALS. DANGER: Corrosive: Causes irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Do not breathe dust, vapor or spray mist. Wear goggles, face shield or safety glasses. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

PHYSICAL OR CHEMICAL HAZARDS: Strong oxidizing agent: Do not mix with other chemicals. Mix only with water. Never add water to product. Always add product to large quantities of water. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter or other chemicals will start a chemical reaction and generate heat, hazardous gas, possible fire and explosion. In case of contamination or decomposition do not reseal container. If possible, isolate container in open air or well ventilated area. Flood area with large volumes of water.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish and aquatic organisms

## 16. OTHER INFORMATION

ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL. Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section 15 of this document should NOT be considered all-inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements. The information in this SDS was obtained from sources, which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

HMIS Rating: Health: 3  
Flammability: 0  
Reactivity: 1

NFPA Rating: Health: 2  
Fire: 0  
Reactivity: 1

Created On: 5/18/2015  
Revision Date: 2/11/2020

Special Hazard Warning: OX - Oxidizer, Class 1