

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

IDENTIFICATION

Product Names: Kendocide

Other Names: Disodium Dichlorophen 40% Solution.

Product Code(s): 100mL, 250mL, 500mL, 1L, 5L, 20L, 200L

USE: To remove unwanted algae and moss from synthetic courts, pavements, and lawns.

COMPANY DETAILS: Kendon Chemical & MNFG. Co. Pty Ltd
A.B.N. 27 004 281 967
8-10 Abbot Street
Fairfield, Victoria 3078
Phone: 03 9497 2822
Fax: 03 9499 7225

Emergency Telephone No: **Business Hrs** **03 9497 2822**
After Hrs **0418-530-461 (General Manager)**

2. HAZARD IDENTIFICATION

Emergency Overview: Dark brown liquid solution with a characteristic odour. Corrosive, Harmful, Causes burns. Harmful if swallowed. Risk of serious eye damage. Environmental Hazard: Toxic to aquatic life.

Dangerous Goods Information:

Dangerous Goods according in accordance with the ADG Code (Road & Rail), IMDG Code (Sea) and IATA Regulations (Air).

CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE 3-5%), Class 8, UN 1760, PG II
IMDG Code Marine Pollutant: YES

GHS Hazardous Chemical Information:

Classified as a Hazardous Chemical to the Australian GHS Criteria.

Signal Word: DANGER

Classification:	Skin Corrosion	Category 1
	Serious Eye Damage	Category 1
	Acute Tox – Swallow	Category 4
	Corrosive to Metals	Category 1
	Aquatic Acute	Category 2
	Aquatic Chronic	Category 2



Hazard Statements: Causes severe burns and eye damage
Causes serious eye damage.
Harmful if swallowed.
May be corrosive to metals.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

Precautionary Statements

- Prevention** Keep only in original packaging.
Wear protective gloves and clothing / eye protection / face protection.
Do NOT breathe mists or spray.
Use only outdoors or in a well-ventilated area.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
- Response** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Immediately call a POISON CENTER or doctor/physician.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Take off contaminated clothing and wash before reuse.
Absorb spillage to prevent material damage.
- Storage** Store locked up.
Store in a corrosion resistant container or with a corrosion resistant inner liner.
- Disposal** Dispose of contents / container in accordance with the Local, State & Federal EPA waste regulations.

Hazardous Substance: Causes burns. Harmful if swallowed. Risk if serious damage to eyes. (For information)
Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Poison Schedule S6 **Signal Word** POISON

Acute Health Effects

- Swallowed Harmful if swallowed. Will cause severe burns to the mouth, mucous membranes, throat, oesophagus and stomach with effects including: Spontaneous vomiting with diarrhoea and possible bloody stools.
- Eye Will cause burns to the eyes, with effects including: pain, tearing, corneal opacity and blindness. If prompt action is not taken, permanent eye damage will occur. Even the brief contact with eyes will result in pain and damage.
- Skin Will cause burns to the skin, with effects including: Redness, blistering, localised pain, dermatitis and burns.
- Inhaled If inhaled (e.g as a mist) will cause severe irritation to the nose, throat and respiratory system with effects including: Dizziness, headache, incoordination, chest pains, coughing, respiratory paralysis and or failure.

Chronic Health Effects

- All Routes Prolonged or repeated skin contact will lead to death (necrosis) of the skin.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
Disodium-4,4'-Dichloro-2,2'-Methylenediphenolate	40% approx.	22232-25-3
Sodium Hydroxide	3-5%	1310-73-2
Water	50-60%	7732-18-5

The typical Disodium Dichlorophen concentration range will be 405-425 g/L

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

4. FIRST AID MEASURES

Swallowed:	If swallowed rinse mouth with water. Give sips of cold water to soothe the mouth and throat. Do NOT induce vomiting. Seek immediate medical attention..
Eyes:	If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eyelids are held open. Seek immediate medical attention.
Skin:	Wash the skin with soap and water. Remove contaminated clothing and footwear. Ensure contaminated clothing is thoroughly washed before using again. If skin appears damaged seek medical attention.
Inhaled:	Remove victim to fresh air. Remove contaminated clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical attention.
First-Aid Facilities:	Eye wash and safety shower, plus normal washroom facilities nearby.
Advice to Doctor:	Treat symptomatically. Poisons Information Centres in Australia: 13 1126.

5. FIRE-FIGHTING MEASURES

Fire or Explosion Hazard:	Not a fire or explosion hazard. Will not burn due to the high water content (55% approx.)
Extinguishing Media:	Water fog (or if unavailable fine water spray); Carbon Dioxide, Dry Chemical, Foam. Or use media suited to surrounding burning material. Avoid using large quantities of water.
Combustion Product Hazards:	Harmful and corrosive Sodium Hydroxide mists plus partial decomposition products. May form Carbon Monoxide and smoke (if combustion is incomplete).
Special Protective Precautions & Equipment:	Move containers from the fire area if it can be done without risk. If containers are exposed to fire keep them cool by spraying with water. The original product and decomposition products are corrosive and harmful. Fire-fighters will need to wear self contained breathing apparatus under fire conditions, especially in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:	Wear protective equipment in accordance with Section 8. Stop leak if you can do it without risk. Spills may make the floor very slippery. Prevent spillage from entering drains and watercourses. Contain spill and cover with damp inert absorbent (such as vermiculite, clay, sand, soil). Sweep up. Collect spilled material and waste in labelled, sealable containers for recycling or disposal. After final cleanup of the spill, wash the area with detergent and excess water, preventing run-off from entering drains. Disposal: See Section 13 for Disposal Considerations
-------------------------------------	---

7. HANDLING AND STORAGE

Handling:	Use in a well ventilated area. Do not use galvanised or aluminium vessels for mixing. Plastic or steel vessels are suitable Do not combine with any other material. Apply in accordance with the Directions for Use label. When diluted to be used (at ≤ 20 mL concentrate per 1000 mL water), the diluted product is <u>no longer classified as a Dangerous Goods Corrosive</u> . The diluted product (at ≤ 20 mL concentrate per 1000 mL water), should be managed as able to Cause Eye Irritation.
------------------	--

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

Storage:

Store in the closed, original container in a cool (5-40°C), well ventilated area. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs. Do not store in direct sunlight. Protect from frost. Store away from sources of heat or ignition, acids and strong oxidising agents. Keep containers closed at all times.

Store in accordance with Work Health & Safety Regulations or Dangerous Goods (Storage & Handling) Regulations and AS3780 Storage & Handling of Corrosive Substances.

May be stored in plastic, plastic lined or stainless steel containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:

Exposure Standards determined by Safe Work Australia (formerly ASCC, NOHSC).
Sodium Hydroxide 2 mg/m³ TWA Peak Limitation
Disodium Dichlorophen No exposure standard has been allocated.

Design and Engineering Control Measures:

Handle in well ventilated areas, natural ventilation is generally adequate.

Personal Protective Equipment:

Avoid skin, eye and respiratory contact with concentrate, solutions and mists.

EYES: Wear chemical goggles or faceshield when handling the concentrate.

GLOVES: PVC or Rubber.

RESPIRATORY: If exposure to spray is expected, select and use respirators in accordance with AS/NZS 1715/1716.

When opening the container, preparing spray and using the prepared spray wear washable clothing buttoned to the neck and wrist and a washable hat, PVC or rubber gloves and protect the face from spray mist with a face shield.

Do not use in enclosed areas where the spray mist may come into skin, eye or respiratory contact with any person.

Always wash hands before smoking, eating, drinking or using the toilet.

Requirements Concerning Training

Comply with training requirements in your State. People who use pesticides in their job or business must have training in the application of these materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form

Aqueous solution.

Appearance and Odour

Dark brown liquid solution with a characteristic odour.

Chemical Formula (for the main ingredients)

Disodium Dichlorophen: C₁₃-H₈-Cl₂-O₂.2Na Sodium Hydroxide: NaOH
Disodium Dichlorophen MW: 313 Sodium Hydroxide MW: 40.0

Melting Point / Boiling Point

MP of the Solution: <5°C (as it contains approx. 55% water)
BP of the Solution: 100°C approx. (as it contains approx. 55% water)

Vapour Pressure

As for water.

Density

1.18 –1.24 gm/cm³ at 20°C

Relative Vapour Density

Not available

Solubility

The solution may be further diluted in water.

Percent volatile by volume

55% approx. (Water)

pH

Concentrate: 13
10% Solution: 11.9-12.1
1% Solution: 10.9-11.1

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

Odour Threshold	Not available
Saturated Vapour Conc'n	Not available
Evaporation Rate	Not available (Butyl Acetate = 1)
Octanol/Water Partition Co-efficient	log P(o/w) : <1 (for Disodium Dichlorophen, estimated)
Corrosiveness	Corrosive due to the 3-5% NaOH content. Reacts with some metals. Corrosive to human tissues.

Flammable Properties	Not readily combustible due the high water content (55% approx.).
Flashpoint	Not applicable to the 55% water solution.
Flammability Limits (FL) (%)	Not applicable to the 55% water solution.
Auto-ignition Temp	Not applicable to the 55% water solution.

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of use. Decomposition only occurs above 100°C after loss of water.
Conditions To Avoid:	Formation of corrosive, harmful mists.
Incompatible Materials:	Strong Acids; Strong oxidizers. Can react with Aluminium and Zinc to produce flammable Hydrogen gas.
Unsuitable Container Materials:	Aluminium; Zinc; Galvanised Iron.
Hazardous Decomposition Products:	Harmful and corrosive mists of Sodium Hydroxide. Once dried: Carbon Monoxide and smoke (if combustion is incomplete).
Hazardous Reactions:	Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

GHS Criteria: [As the overall product (as 100%)]

ACUTE ORAL TOXICITY	: Acute Tox – Swallow	Category 4
ACUTE SKIN TOXICITY	: Not classified.	
ACUTE INHAL'N TOXICITY	: Not classified.	
SKIN CORROSION / IRRITATION	: Skin Corrosion	Category 1A
SERIOUS EYE DAMAGE / EYE IRRITATION:	Serious Eye Damage	Category 1
SKIN SENSITISATION	: Data lacking	
RESPIRATORY SENSITISATION	: Data lacking	
GERM CELL MUTAGENICITY	: Data lacking	
CARCINOGENICITY	: Data lacking	
REPRODUCTIVE TOXICITY	: Data lacking	
SPECIFIC TARGET ORGAN TOXICITY – Single Exposure:	: Data lacking	
SPECIFIC TARGET ORGAN TOXICITY –Repeated Exposure:	: Data lacking	
ASPIRATION HAZARD	: Data lacking	

Disodium Dichlorophen (as 100%): Some Toxicity Data is available for Disodium Dichlorophen.

Comment: The soluble Disodium Dichlorophen salt in a 3-5% Sodium Hydroxide solution is expected to have a similar toxicity to Sodium Dichlorophen and be more toxic than the insoluble Dichlorophen compound.

See IMAP Tier II Assessment: by searching on CAS: 22232-25-3

<https://www.industrialchemicals.gov.au/chemical-information/search-assessments>

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

Dichlorophen (as 100%)

Acute Oral Toxicity: LD50 (rat, male) 810-1540 mg/kg for Sodium Dichlorophen (UK HSE July 2004)
LD50 (rat, female) 720-1030 mg/kg for Sodium Dichlorophen (UK HSE July 2004)
LD50 (mouse) 1000 mg/kg for Dichlorophen RTECS
LD50 (g'pig) 1000 mg/kg for Dichlorophen RTECS

Sodium Hydroxide (3-5%)

Skin Irritation Corrosive (rabbit).

Eye Irritation Corrosive (rabbit).

12. ECOLOGICAL INFORMATION

General: Toxic to aquatic life with long lasting effects. Water polluting substance.
Avoid contaminating waterways.

Ecotoxicity Data: **Acute Fish Aquatic Toxicity** – LC50 (Plaice, 48hrs): 4.2 mg/L (Sodium Dichlorophen)
Dichlorophen exhibits Algicidal Action at concentrations of 5 mg/L. (UK HSE July 2004)

Octanol Water Partition Co-efficient log Pow <1 (estimated)

See IMAP Tier II Assessment: by searching on CAS: 22232-25-3

<https://www.industrialchemicals.gov.au/chemical-information/search-assessments>

Persistence & Degradability

Slowly biodegradable once highly diluted (>10000 times approx.) to a degree that does not inhibit micro organisms due to its biocidal activity. Under these diluted conditions it is expected to be slowly but ultimately biodegradable.

Aerobic degradation (10-20 mg/L Dichlorophen): 50% degradation over a 3 week acclimatization. Concentrations up to 20 mg/L are reported to have no adverse effect on the degradation activity in sewerage treatment works. (from UK HSE July 2004)

Photolysis of Dichlorophen (Normal UK Solar radiation): 10.3 days half life.

Mobility: Soluble in water so will be readily mobile.

Other Ingredients **Sodium Hydroxide (3-5%):** The highly alkaline pH will be harmful to aquatic life due to pH shift away from neutral.

GHS Criteria: [As the overall product (as 100%)]

Hazardous to the Aquatic Environment (acute/short-term) : Aquatic Acute Category 2

Hazardous to the Aquatic Environment (long-term) : Aquatic Chronic Category 2

13. DISPOSAL CONSIDERATIONS

Disposal: Disposal to be in accordance with Local, State & Federal EPA waste regulations.
Advise its corrosive, harmful, environmentally hazardous nature.

Do NOT dispose of the undiluted product on-site.

Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals. The product should NOT be burnt and will need to be reacted.

Empty Containers:

Do not use this container for any other purpose.

Triple rinse containers or preferably pressure rinse containers, add rinsings to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations.

Collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers is preferred. After triple rinsing the container, arrange for collection of the container, where collection & recycling programs are in place.

If not recycling, break, crush or puncture and bury containers in a local authority approved landfill. Empty containers and product should NOT be burnt.

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

14. TRANSPORT INFORMATION

ROAD & RAIL:	Dangerous Goods: by the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
SEA:	Dangerous Goods according to the International Maritime Dangerous Goods Code (IMDG Code).
AIR:	Dangerous Goods according to the International Air Transport Association (IATA) Dangerous Goods Regulations.
UN Number:	1760
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (SODIUM HYDROXIDE 3-5%)
Dangerous Goods Class:	8
Subsidiary risk:	-
Packing Group:	II
Hazchem Code:	2X (Not applicable to containers ≤500L or kg).

Dangerous Goods – AERG - Australian Emergency Response Guidebook 2021 - CAP
For TOXIC AND/OR CORROSIVE (Non-Combustible) - IER Guide No: 154
Initial Emergency Response Guide (SAA/SNZ HB76)
For TOXIC AND/OR CORROSIVE SUBSTANCES - HB76 Guide No: 37
Marine Pollutant to IMDG Code: **YES**

15. REGULATORY INFORMATION

GHS Hazardous Chemical Information:

Classified as a Hazardous Chemical to the Australian GHS Criteria.

Signal Word: DANGER

Classification:	Skin Corrosion	Category 1
	Serious Eye Damage	Category 1
	Acute Tox – Swallow	Category 4
	Corrosive to Metals	Category 1
	Aquatic Acute	Category 2
	Aquatic Chronic	Category 2



Hazard Statements: H314 Causes severe burns and eye damage.
H318 Causes serious eye damage.
H302 Harmful if swallowed.
H290 May be corrosive to metals.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements

- Prevention**
 - P234 Keep only in original packaging.
 - P280 Wear protective gloves and clothing / eye protection / face protection.
 - P260 Do NOT breathe mists or spray.
 - P271 Use only outdoors or in a well-ventilated area.
 - P264 Wash thoroughly after handling.
 - P270 Do not eat, drink or smoke when using this product.
 - P273 Avoid release to the environment.
- Response**
 - P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 - P310 Immediately call a POISON CENTER or doctor/physician.
 - P303+361+353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
 - P310 Immediately call a POISON CENTER or doctor/physician.

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P362+P364 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.

- **Storage** P405 Store locked up.
P406 Store in a corrosion resistant container or with a corrosion resistant inner liner.
- **Disposal** P501 Dispose of contents / container in accordance with the Local, State & Federal EPA waste regulations.

Hazardous Substance: Causes burns. Harmful if swallowed. Risk if serious damage to eyes. (For information)
Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Dangerous Goods (see Section 14)

SUSMP Schedule Poison: S6 (Dichlorophen is specifically listed) **POISON**

Note: Also contains Sodium Hydroxide 3-5% (specifically listed) but it does not affect the Schedule chosen.

KEEP OUT OF REACH OF CHILDREN. READ SAFETY DIRECTIONS BEFORE OPENING OR USING

AICC: All ingredients are on the Australian Inventory of Industrial Chemicals

APVMA Approval No. P31111B

16. OTHER INFORMATION

SDS Dates and Revisions

SDS Original Preparation Date : May 2004, Apr 2006, Mar 2009, June 2011, Oct 2015, 21 Nov 2017
SDS Latest Revision Date : 4th Oct 2022
Sections Changed in Latest Revision : Changes in Sections 1, 2, 9, 11, 12, 14, 15, 16.

Contact Point: phone: (03) 9497 2822 email: CStory@Kendon.com.au
mobile: 0418-530-461 (General Manager)

SDS APPROVED: Kendon Chemical & MNFG

Acronyms Used

ADG Code Australian Dangerous Goods Code for the Transport of Dangerous Goods by Road & Rail
Safe Work Australia Safe Work Australia (SWA) (since 2009). Administers ASCC & NOHSC documents.
HCIS Hazardous Chemicals Information System at: <http://hcis.safeworkaustralia.gov.au/>
IMAP Inventory Multi-tiered Assessment and Prioritisation framework (NICNAS / AICIS)
www.industrialchemicals.gov.au/consumers-and-community/about-chemical-evaluations
NZ EPA HSNO Environmental Risk Management Authority New Zealand, HSNO Chemical
CCID Classification Information Database (CCID).
<https://www.epa.govt.nz/database-search/>
e-ChemPortal Global Portal to Information on Chemical Substances
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
ECHA European Chemicals Agency at <http://echa.europa.eu/>
ECHA RSD ECHA Registered Substances Database (with SIEF results of chemical reviews)
<http://echa.europa.eu/information-on-chemicals/registered-substances>
ECHA C&LID ECHA Classification & Labelling Inventory Database
<http://echa.europa.eu/information-on-chemicals/cl-inventory-database>

Safety Data Sheet

GHS Hazardous Chemical. Dangerous Goods.

Kendocide

EFSA <https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2010.1876>

WHS Workplace Hazardous Substance (this name is still in use in Victoria)

CAS No. Chemical Abstracts Service Registry Number

UN No. United Nations Dangerous Goods Number

SUSMP Standard for the Uniform Scheduling of Medicines and Poisons

SDS Code Used This SDS has been prepared according to the Australian SWA Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals July 2020 (122 page pdf)

www.safeworkaustralia.gov.au/doc/model-code-practice-preparation-safety-data-sheets-hazardous-chemicals

This SDS summarises to the best of our knowledge the health and safety hazard information on the product and how to safely handle and use the product in the workplace, and should not be construed as guaranteeing specific technical properties. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Since methods and conditions are beyond our control, in inappropriate contexts we do not accept liability for any damages resulting from the use of, or reliance on, this information.

Reviewers Initials / Yr / Mth: JS2210