

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : Defender (Dilution 0.5 -5550 ppm)
 Synonyms : Klorkleen 2 (Dilution 0.5 -5550 ppm)

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Effervescent NaDCC Tablets are used for surface disinfection

1.3. Supplier

Trust Medical,
 21370 Heywood Avenue,
 Lakeville, Minnesota, 55044, USA
 Tel: +1 888 200 0917
 Fax: +1 952 469 1823

1.4. Emergency telephone number

Emergency number (Medentech) : '+353 53 9117900 (Office hours only, Monday - Friday, 8.30 am - 4.00pm)
 Ireland: Poisons Information for medical professionals: Telephone 01 809 2566 (8.00am – 10.00pm).
 USA: IN THE EVENT OF A MEDICAL EMERGENCY CALL YOUR POISON CONTROL CENTER AT 1-800-222-1222
 Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Troclosene Sodium / 1,3,5 -Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt	(CAS-No.) 2893-78-9	0.000025 - 0.28	Ox. Liq. 3, H272 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Adipic Acid	(CAS-No.) 124-04-9	0.000012 - 0.13	Eye Irrit. 2A, H319
Sodium bicarbonate	(CAS-No.) 144-55-8	0.00001 - 0.12	Not classified
sodium carbonate	(CAS-No.) 497-19-8	0.000002 - 0.02	Eye Irrit. 2, H319
SURFAC SDBS80	NA	0.000001 - 0.01	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412

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Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Troclosene Sodium / 1,3,5-Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)
Not applicable
Adipic Acid (124-04-9)
Not applicable

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Sodium bicarbonate (144-55-8)
Not applicable
sodium carbonate (497-19-8)
Not applicable
SURFAC SDBS80
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

In case of repeated or prolonged contact (industrial environment), wear personal protective equipment.

Hand protection:

In case of repeated or prolonged contact (industrial environment), wear gloves; Chemical resistant gloves in accordance with OSHA requirements (29 CFR 1910.138)

Eye protection:

In industrial environment, use safety glasses for eye protection tested and approved in accordance with OSHA requirements (29 CFR 1910.133).

Respiratory protection:

Inhalation is unlikely route of exposure in this type of products

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Note: The Chemical/Physical properties outlined below relate to the tablet product which is used to prepare the in-use dilution solution.

Physical state	: Solid
Appearance	: Tablets.
Colour	: white Off white
Odour	: slight chlorine
Odour threshold	: No data available
pH	: No data available
pH solution	: 5.5 - 6.5 For neat form (as supplied)
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: completely soluble. (100%) in water.
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 225 - 250 °C
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Troclosene Sodium / 1,3,5-Triazine - 2,4,6 (1H, 3H,5H) - trione, 1, 3 - dichloro-,sodium salt (2893-78-9)

LD50 oral rat	735 mg/kg bodyweight
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Sodium bicarbonate (144-55-8)

LD50 oral rat	4220 mg/kg bodyweight
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sodium carbonate (497-19-8)

LD50 dermal rat	2210 mg/kg
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Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

Defender (Dilution 0.5 - 5550 ppm)

Persistence and degradability	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. This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
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12.3. Bioaccumulative potential

Defender (Dilution 0.5 - 5550 ppm)

Bioaccumulative potential

This material hydrolyses in water liberating free available chlorine and cyanuric acid. These products are not bioaccumulative. Bioaccumulation not expected to occur.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Disposal Instructions for solution: In appropriate quantities and concentrations, and subject to local and national regulations, diluted solutions may be flushed to sanitary sewer.

Hazardous Waste Code: Not Assigned

Waste from residues/unused products/undiluted products/contaminated packaging: Dispose of according to local/national/international regulations. Contact appropriate licensed collector as required.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

USA:

All the ingredients in this preparation are listed in the EPA TSCA Inventory.

This product is registered under FIFRA. – Klorkleen 2 EPA registration number: 71847-7. “Defender” is sub-registered from Klorkleen 2, EPA Reg Number: 71847-7-92281

PLEASE REFER TO EPA MASTER LABEL FOR ADDITIONAL SAFETY AND OTHER INFORMATION ON THE MIXTURE

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

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)

Workplace Classification – This product is considered hazardous under the OSHA Hazard Communication

Standard (29CFR 1910.1200)

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15.2. International regulations

Canada:

Canadian Chemical Inventory (DSL) – Listed
WHMIS hazard class –
D2B toxic materials
For Sodium dichloroisocyanurate:
C oxidizing materials
D1B toxic materials
For Sodium Carbonate:
E corrosive materials

The active substance is also listed in the following chemical inventories:

- Australian Chemical Inventory (AICS) – Listed
- China Chemical Inventory (IECSC) – Listed
- European Union Inventory (EINECS) – Reported
- Japan Chemical Inventory (ENCS) – Listed
- Korean Chemical Inventory (KECI) – Listed
- New Zealand Chemical Inventory (NZIOC) – Listed
- Philippines Priority Chemical List (PICCS) – Listed

The mixture is generally classified and registered as a disinfectant, biocide, or pesticide.

EU Regulation: If required for sale in Ireland (country of origin), the mixture must be notified to the Pesticide Control Service, Department of Agriculture, Food and the Marine as a biocide under its appropriate trade name. The product is generally classified as a biocide in the EU, and as such is subject to regulation under EU Regulation No. 528/2012 (Biocidal Products Regulation), and all other applicable EU national biocide regulations.

SECTION 16: Other information

Full text of H-statements detailed in Section 3:

Note: These H (Hazard) statements are applicable to the ingredients used in the mixture as per Section 3 above – “GHS US classification”. The full text of these statements is shown below for information purposes. As per Section 2, the in-use dilution solution is not classified under GHS regulation, so H statements are not applicable to the in-use dilution solution.

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

SDS US (GHS HazCom 2012) Prop 65 Correction

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

REVISION HISTORY:

Revision No. 2 – SDS updated to clarify Section 13 and to add more detail.

Revision No. 1 – SDS updated to clarify Section 9, and applicability of H statement table in Section 16.

Revision No. 0 – New SDS prepared to cover all in-use dilutions of Klorkleen 2 product