

SAFETY DATA SHEET

according to the Global Harmonized System (and with all of the information required by the HPR)

Revision Date 11/21/2018

Version 3.3

SECTION 1. Identification**Product identifier**

Product number	638198
Millipore Ref.	ZWCL01F50
Product name	ROProtect C Qty 48

Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Water treatment chemical, Disinfectants and general biocidal products
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Details of the supplier of the safety data sheet

Company	Millipore (Canada) Ltd 109 Woodbine Downs Blvd. Unit 5 Etobicoke Ontario M9W 6Y1 Canada General Inquiries: +1 800-645-5476 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5) MilliporeSigma is a business of Merck KGaA, Darmstadt, Germany.
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Emergency telephone

800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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SECTION 2. Hazards identification**GHS Classification**

Acute toxicity, Category 4, Oral, H302
Eye irritation, Category 2A, H319
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system, H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling*Hazard pictograms*

Signal Word
Warning

Hazard Statements

H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

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Precautionary Statements

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/doctor if you feel unwell.

P330 Rinse mouth.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature

Mixture

Hazardous ingredients

Chemical name (Concentration)

CAS-No.

troclosene sodium, dihydrate (>= 70 % - < 90 %)

51580-86-0

sodium carbonate (>= 10 % - < 20 %)

497-19-8

adipic acid (>= 5 % - < 10 %)

124-04-9

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

Eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

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Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, Cough, Shortness of breath, pain

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Oxidizing

Avoid shock and friction.

Risk of dust explosion.

Ambient fire may liberate hazardous vapors.

Fire may cause evolution of:

Hydrogen chloride gas, nitrous gases, nitrogen oxides

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Ingredients

Basis	Value	Threshold limits	Remarks
<i>adipic acid 124-04-9</i>			
CAD AB OEL	Time Weighted Average (TWA):	5 mg/m ³	
CAD BC OEL	Time Weighted Average (TWA):	5 mg/m ³	
CAD MB OEL	Time Weighted Average (TWA):	5 mg/m ³	
CAD ON OEL	Time Weighted Average (TWAEV):	5 mg/m ³	
OEL (QUE)	Time Weighted Average (TWA):	5 mg/m ³	

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Change contaminated clothing. Application of skin- protective barrier cream recommended.
Wash hands after working with substance.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material: Nitrile rubber
Glove thickness: 0.11 mm
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber
Glove thickness: 0.11 mm
Break through time: > 480 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Other protective equipment:
protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are performed according to the instructions of the producer. These measures have to be properly documented.

SECTION 9. Physical and chemical properties

Physical state	pellets
Color	white
Odor	characteristic of chlorine
Odor Threshold	0.08 ppm
pH	5.8 - 6.2 at 10 g/l 68 °F (20 °C)
Melting point	464 - 482 °F (240 - 250 °C)
Boiling point	No information available.
Flash point	Not applicable
Evaporation rate	No information available.
Flammability (solid, gas)	Not applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor pressure	No information available.

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Relative vapor density	No information available.
Density	1.6 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	500 g/l at 77 °F (25 °C)
Partition coefficient: n-octanol/water	No information available.
Autoignition temperature	The substance or mixture is not classified as self heating.
Decomposition temperature	169 °F (76 °C)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	Oxidizing potential
Ignition temperature	482 °F (250 °C)

SECTION 10. Stability and reactivity

Reactivity

Oxidizing
highly reactive
Risk of dust explosion.
sensitive to shock

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:
combustible substances, Organic Substances

A risk of explosion and/or of toxic gas formation exists with the following substances:

Ammonia, urea, ammonium compounds, Bases, acids

Generates dangerous gases or fumes in contact with:

Acids

Conditions to avoid

no information available

Incompatible materials

no information available

Hazardous decomposition products

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in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Target Organs

Respiratory system

Acute oral toxicity

Acute toxicity estimate: 619.04 mg/kg

Calculation method

Acute inhalation toxicity

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Eye irritation

Mixture causes serious eye irritation.

Specific target organ systemic toxicity - single exposure

May cause respiratory irritation.

Target Organs: Respiratory system

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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Ingredients

troclosene sodium, dihydrate

Acute oral toxicity

LD50 Rat: 550 - 1,600 mg/kg (External MSDS)

Acute dermal toxicity

LD50 Rabbit: > 5,000 mg/kg (External MSDS)

Eye irritation

Rabbit

Result: Corrosive

US-EPA

Sensitization

Sensitization test (Magnusson and Kligman): Guinea pig

Result: negative

Method: OECD Test Guideline 406

Germ cell mutagenicity

Genotoxicity in vivo

Rat

Result: negative

Method: OECD Test Guideline 475

Genotoxicity in vitro

Ames test

Escherichia coli

Result: negative

Method: OECD Test Guideline 471

sodium carbonate

Acute oral toxicity

LD50 Rat: 2,800 mg/kg (ECHA)

LDLO human: 714 mg/kg (RTECS)

Acute dermal toxicity

LD50 Rabbit: > 2,000 mg/kg

US-EPA

Skin irritation

Rabbit

Result: No skin irritation

OECD Test Guideline 404

Eye irritation

Rabbit

Result: Eye irritation

US-EPA

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Escherichia coli

Result: negative

(Lit.)

adipic acid

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Acute oral toxicity

LD50 Rat: ca. 5,560 mg/kg

OECD Test Guideline 401

Acute inhalation toxicity

LC50 Rat: > 7.7 mg/l; 4 h ; dust/mist

OECD Test Guideline 403

Acute dermal toxicity

LD50 Rabbit: > 7,940 mg/kg (40% solution) (External MSDS)

Skin irritation

Rabbit

Result: No skin irritation

OECD Test Guideline 404

Eye irritation

Rabbit

Result: Severe irritations

OECD Test Guideline 405

Sensitization

Maximization Test Guinea pig

Result: negative

(External MSDS)

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

In vitro mammalian cell gene mutation test

Chinese hamster lung cells

Result: negative

Method: OECD Test Guideline 476

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Additional ecological information

Discharge into the environment must be avoided.

Ingredients

troclosene sodium, dihydrate

Toxicity to fish

LC50 Oncorhynchus mykiss (rainbow trout): 0.25 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 Daphnia magna (Water flea): 0.28 mg/l; 48 h (ECOTOX Database)

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Toxicity to algae

EC50 algae: > 5,000 mg/l; 96 h

OECD Test Guideline 201

Toxicity to bacteria

NOEC activated sludge: 2,700 mg/l; 3 h

OECD Test Guideline 209

Toxicity to fish (Chronic toxicity)

NOEC: 756 mg/l; 28 d

(ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

Daphnia magna (Water flea): 2,600 mg/l; 21 d

OECD Test Guideline 211

Biodegradability

4 %; 60 d

OECD Test Guideline 306

sodium carbonate

Toxicity to fish

static test LC50 *Lepomis macrochirus* (Bluegill sunfish): 300 mg/l; 96 h (ECHA)

Toxicity to daphnia and other aquatic invertebrates

semi-static test EC50 *Ceriodaphnia dubia* (water flea): 220 - 227 mg/l; 48 h

US-EPA

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Partition coefficient: n-octanol/water

Not applicable

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

adipic acid

Toxicity to fish

LC50 *Pimephales promelas* (fathead minnow): 97 mg/l; 96 h (ECOTOX Database)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 46 mg/l; 48 h

OECD Test Guideline 202

Toxicity to algae

static test ErC50 *Pseudokirchneriella subcapitata* (green algae): 59 mg/l; 72 h

OECD Test Guideline 201

Toxicity to bacteria

EC50 *Pseudomonas putida*: 92 mg/l; 17 h

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static test EC50 activated sludge: 7,911 mg/l; 3 h
OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

NOEC Daphnia magna (Water flea): 6.3 mg/l; 21 d

OECD Test Guideline 211

Biodegradability

100 %; 28 d

OECD Test Guideline 301B

Readily biodegradable.

Biochemical Oxygen Demand (BOD)

598 mg/g (5 d)

(IUCLID)

Theoretical oxygen demand (ThOD)

1,423 mg/g

(IUCLID)

Ratio BOD/ThBOD

BOD5 36 %

(Lit.)

Partition coefficient: n-octanol/water

log Pow: 0.081 (25 °C)

OECD Test Guideline 107

Bioaccumulation is not expected. (IUCLID)

Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number

UN 3077

Proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,
N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT
DIHYDRATE)

Class

9

Packing group

III

Environmentally hazardous

--

Air transport (IATA)

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UN number UN 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT DIHYDRATE)
Class 9
Packing group III
Environmentally hazardous --
Special precautions for user no

Sea transport (IMDG)

UN number UN 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DICHLOROISOCYANURIC ACID SODIUM SALT DIHYDRATE)
Class 9
Packing group III
Environmentally hazardous --
Special precautions for user yes
EmS F-A S-F

SECTION 15. Regulatory information

United States of America

Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Notification status

TSCA: Not Listed on TSCA inventory. For Research and Development Use only. Not For Manufacturing or Commercial Purposes.
DSL: This product contains one or several components that are not on the Canadian DSL nor NDSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Labeling

Hazard pictograms



Signal Word

Warning

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Hazard Statements

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

Prevention

P273 Avoid release to the environment.

Response

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Revision Date 11/21/2018

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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