

Proxitane WW-12 Microbiocide

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or mixture

Product name : PROXITANE® WW-12 Microbiocide
Synonyms : PAA, Peroxyethanoic acid, Peracetic acid
Molecular formula : CH₃-COOOH
Molecular weight : 76.05 g/mol

1.2. Use of the Substance/Mixture

Recommended use : - Pesticide
- It is a violation of federal law to use this product in a manner inconsistent with its labeling.
- For further information, please contact: Supplier

1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.
3333 RICHMOND AVENUE
HOUSTON TX 77098-3099

1.4. Emergency and contact telephone numbers

Emergency telephone number : **US: +1-713-525-6500 (Product information)**
US: +1-800-765-8292 (Product information)

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= serious F= slight I= moderate S= Oxidizer
HMIS : H= serious F= slight R= moderate PPE = Supplied by User; dependent on local conditions

General Information

Appearance : liquid
Colour : colourless
Odour : pungent

Main effects

- Oxidising
- Contact with combustible material may cause fire.
- Causes severe burns.
- Harmful by inhalation, in contact with skin and if swallowed.
- Contains a(many) dangerous product(s) for the environment.

2.2. Potential Health Effects:

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Inhalation

- Corrosive to respiratory system.
- Symptoms: Breathing difficulties, Cough, chemical pneumonitis, pulmonary oedema.
- Repeated or prolonged exposure: Nose bleeding, chronic bronchitis.

Eye contact

- Causes severe burns.
- Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- Symptoms: Redness, Lachrymation, Swelling of tissue, Burn.

Skin contact

- Causes severe burns.
- Symptoms: Redness, Swelling of tissue, Burn.

Ingestion

- If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
- Symptoms: Nausea, Abdominal pain, Bloody vomiting, Diarrhoea, Suffocation, Cough, Severe shortness of breath.
- Risk of: Respiratory disorder.

Other toxicity effects

- See section 11: Toxicological Information

2.3. Environmental Effects:

- See section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Acetic acid

CAS-No.	:	64-19-7
Symbol(s)	:	C
R-phrased(s)	:	R10, R35
Concentration	:	appr. 20.0%

Hydrogen peroxide

CAS-No.	:	7722-84-1
Concentration	:	appr. 18.5%

Peracetic acid

CAS-No.	:	79-21-0
Concentration	:	appr. 12.0%

4. FIRST AID MEASURES

4.1. Inhalation

- In case of accident by inhalation: remove casualty to fresh air and keep at rest.
- Victim to lie down in the recovery position, cover and keep him warm.
- Oxygen or artificial respiration if needed.
- Call a physician immediately.

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4.2. Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Consult with an ophthalmologist immediately in all cases.
- Take victim immediately to hospital.

4.3. Skin contact

- Take off contaminated clothing and shoes immediately.
- Wash off immediately with plenty of water.
- Keep warm and in a quiet place.
- Wash contaminated clothing before re-use.
- Call a physician immediately.

4.4. Ingestion

- Call a physician immediately.
- Take victim immediately to hospital.

If victim is conscious:

- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.

If victim is unconscious but breathing:

- Artificial respiration and/or oxygen may be necessary.

5. FIREFIGHTING MEASURES

5.1. Suitable extinguishing media

- Water
- Water spray
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Extinguishing media which shall not be used for safety reasons

- None

5.3. Special exposure hazards in a fire

- Oxygen released in thermal decomposition may support combustion
- Heating may cause a fire.

5.4. Hazardous decomposition products

- Oxygen
- The release of other hazardous decomposition products is possible.

5.5. Special protective equipment for firefighters

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.
- Wear chemical resistant oversuit
- Cool containers/tanks with water spray.

5.6. Other information

- Keep product and empty container away from heat and sources of ignition.

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- Keep containers and surroundings cool with water spray.
- Approach from upwind.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. Advice for non-emergency personnel

- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.

6.1.2. Advice for emergency responders

- Use personal protective equipment.
- Drying of this product on clothing or combustible materials may cause fire.
- Keep wetted with water.
- Prevent further leakage or spillage.
- Keep away from Incompatible products.

6.2. Environmental precautions

- The product should not be allowed to enter drains, water courses or the soil.
- If the product contaminates rivers and lakes or drains inform respective authorities.
- Do not flush into surface water or sanitary sewer system.
- In case of accidental release or spill, immediately notify the appropriate authorities if required by Federal, State/Provincial and local laws and regulations.

6.3. Methods and materials for containment and cleaning up

- Dam up.
- Soak up with inert absorbent material.
- Dilute with plenty of water.
- Do not add chemical products.
- Treat recovered material as described in the section "Disposal considerations".
- Never return spills in original containers for re-use.

7. HANDLING AND STORAGE

7.1. Handling

- Use only in well-ventilated areas.
- Keep away from heat.
- Keep away from Incompatible products.
- May not get in touch with:
 - Organic materials
- Use only equipment and materials which are compatible with the product.
- Before all operations, passivate the piping circuits and vessels according to the procedure recommended by the producer.
- Never return unused material to storage receptacle.
- Use only in an area with adequate water supply
- Containers and equipment used to handle the product should be used exclusively for that product.

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7.2. Storage

- Keep in a cool, well-ventilated place.
- Keep away from heat.
- Keep away from Incompatible products.
- Keep away from combustible material.
- Store in a receptacle equipped with a vent.
- Store in original container.
- Keep container closed.
- Keep in a banded area.
- Regularly check the condition and temperature of the containers.
- Information about special precautions needed for bulk handling is available on request.
- Keep in properly labelled containers.
- Keep tightly closed in a dry, cool and well-ventilated place.
- Keep in a banded area.
- Electrical equipment should be protected to the appropriate standard.
- Keep away from Incompatible products.

7.3. Packaging material

- Approved grades of HDPE.
- Stainless steel cleaned and passived

7.4. Other information

- Refer to protective measures listed in sections 7 and 8.
- Do not confine the product in a circuit, between closed valves, or in a container without a vent.
- In industrial installations, apply the rules for the prevention of major accidents (consult an expert).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Peracetic acid

- US. ACGIH Threshold Limit Values02 2014
Short term exposure limit = 0.4 ppm
Remarks:Inhalable fraction and vapor.

Hydrogen peroxide

- US. ACGIH Threshold Limit Values02 2014
time weighted average = 1 ppm
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)02 2006
Permissible exposure limit = 1 ppm
Permissible exposure limit = 1.4 mg/m3
- US. OSHA Table Z-1-A (29 CFR 1910.1000)1989
time weighted average = 1 ppm
time weighted average = 1.4 mg/m3
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A06 2008
time weighted average = 1 ppm
time weighted average = 1.4 mg/m3

Acetic acid

- US. ACGIH Threshold Limit Values03 2013
time weighted average = 10 ppm
- US. ACGIH Threshold Limit Values03 2013
Short term exposure limit = 15 ppm
- US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)02 2006
Permissible exposure limit = 10 ppm
Permissible exposure limit = 25 mg/m3
- US. OSHA Table Z-1-A (29 CFR 1910.1000)1989
time weighted average = 10 ppm
time weighted average = 25 mg/m3
- US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A06 2008
time weighted average = 10 ppm
time weighted average = 25 mg/m3

ACGIH® and TLV® are registered trademarks of the American Conference of Governmental Industrial Hygienists.
SAEL = Solvay Acceptable Exposure Limit, Time Weighted Average for 8 hour workdays. No Specific TLV STEL (Short Term Exposure Level) has been set. Excursions in exposure level may exceed 3 times the TLV TWA for no more than a total of 30 minutes during a workday and under no circumstances should they exceed 5 times the TLV TWA.

8.2. Engineering controls

- Ensure adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.
- Refer to protective measures listed in sections 7 and 8.

8.3. Personal protective equipment

8.3.1. Respiratory protection

- In case of insufficient ventilation, wear suitable respiratory equipment.
- Respirator with a vapour filter (EN 141)
- Recommended Filter type:
- ABEK-P2

8.3.2. Hand protection

- Impervious gloves
- Suitable materialbutyl-rubber
- Glove thickness
- $\geq 0,4$ mm
- Break through time:
- > 480 min
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

8.3.3. Eye protection

- Chemical resistant goggles must be worn.
- If splashes are likely to occur, wear:
- Tightly fitting safety goggles
- Face-shield

8.3.4. Skin and body protection

- Apron/boots of butyl rubber if risk of splashing.

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8.3.5. Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance	:	liquid
Colour	:	colourless
Odour	:	pungent

9.2. Important health safety and environmental information

pH	:	<2
Boiling point/boiling range	:	<i>Remarks:</i> Not applicable, Thermal decomposition
Flash point	:	<i>Remarks:</i> Not applicable, Flammable vapours may occur above the SADT
Flammability	:	<u>Lower explosion limit:</u> <i>Remarks:</i> Not applicable
Explosive properties	:	<u>Explosion danger:</u> <i>Remarks:</i> Not applicable
Oxidizing properties	:	<i>Remarks:</i> Oxidising
Relative density / Density	:	1.1
Solubility(ies)	:	Water <i>Remarks:</i> completely miscible Polar organic solvents <i>Remarks:</i> soluble Aromatic solvents <i>Remarks:</i> slightly soluble
Partition coefficient: n-octanol/water	:	<u>log Pow:</u> -1.25

9.3. Other data

Melting point/range	:	ca.-30 °C (-22 °F)
Decomposition temperature	:	>=50 °C(122 °F) <i>Remarks:</i> Self-Accelerating decomposition temperature (SADT)

Remarks : no data available

10. STABILITY AND REACTIVITY

10.1. Stability

- Potential for exothermic hazard
- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Contamination
- To avoid thermal decomposition, do not overheat.

10.3. Materials to avoid

- Acids, Bases, Metals, Salts of metals, Reducing agents, Organic materials, Flammable materials

10.4. Hazardous decomposition products

- Oxygen
- The release of other hazardous decomposition products is possible.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Acute oral toxicity

- LD50,330 mg/kg(7 % solution)

Acute inhalation toxicity

- LC50,1 h,Rat,590 mg/m3(Peracetic acid)

Acute dermal irritation/corrosion

- LD50,Rabbit,1,410 mg/kg(10 % solution)

Skin irritation

- Rabbit,Corrosive

Eye irritation

- Rabbit,Risk of serious damage to eyes.(4 % solution)

Irritation (other route)

- Inhalation,Rat,Irritating to respiratory system.,RD 50 = 22 - 24 mg/m3(Peracetic acid)

Sensitisation

- Guinea pig,Did not cause sensitization on laboratory animals.

Chronic toxicity

- Oral,Repeated exposure,Rat,no systemic effect
- Dermal,Repeated exposure,Guinea pig,irritant effects

Carcinogenicity

- no data available

Genetic toxicity in vitro

- In vitro tests have shown mutagenic effects.

Genetic toxicity in vivo

- Animal testing did not show any mutagenic effects.

Remarks

- corrosive effects
- Causes severe caustic burns to skin and eyes.
- Extremely corrosive and destructive to tissue.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Fishes, *Lepomis macrochirus*, LC50, 96 h, 1.1 mg/l (Pure substance)
- *Danio rerio* (zebra fish), NOEC, 33 Days, 0.00094 mg/l (Pure substance)
- Crustaceans, *Daphnia magna*, EC50, 48 h, 0.73 mg/l (Pure substance)

Chronic toxicity

- *Pseudokirchneriella subcapitata* (green algae), EC50, 72 - 96 h, 0.16 mg/l (Pure substance)

Further information on ecology

- Bacteria, *Pseudomonas aeruginosa*, EC100, 5 min, 5 mg/l
 - Terrestrial plants, various species, Lowest observed effect level, 10 mg/l
- Remarks: phytotoxic effect

12.2. Mobility

- Water
Remarks: soluble, mobile
- Soil/sediments
Remarks: non-significant adsorption

12.3. Persistence and degradability

Abiotic degradation

- Air
Result: The product can be degraded by abiotic (e.g. chemical or photolytic) processes.
- Water
Result: Chemical degradation
- Soil
Result: Chemical degradation

Biodegradation

- aerobic
Result: Biodegradable.
- Effects on waste water treatment plants
Result: inhibitory action

12.4. Bioaccumulative potential

- Result: Does not bioaccumulate.

12.5. Other adverse effects

- no data available

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12.6. Remarks

13. DISPOSAL CONSIDERATIONS

13.1. Waste from residues / unused products

- In accordance with local and national regulations.
- Contact manufacturer.
- Contact waste disposal services.

13.2. Packaging treatment

- Empty containers.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Do not rinse the dedicated containers.
- The empty and clean containers are to be reused in conformity with regulations.
- Where possible recycling is preferred to disposal or incineration.
- In accordance with local and national regulations.

13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - Yes
- Unlisted RCRA Hazardous Waste (40 CFR 302) - Yes
- D001 (ignitable waste)
- D002 (corrosive waste)

14. TRANSPORT INFORMATION

IATA-DGR

UN number	UN3109
Class	5.2
ICAO-Labels	5.2 - Organic peroxide 8 - Corrosive

Proper shipping name:ORGANIC PEROXIDE TYPE F, LIQUID(PEROXYACETIC ACID, TYPE F, STABILIZED)

IMDG

UN number	UN3109
Class	5.2
IMDG-Labels	5.2 - Organic peroxide 8 - Corrosive

EmS	F-J S-R
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Proper shipping name:ORGANIC PEROXIDE TYPE F, LIQUID(PEROXYACETIC ACID, TYPE F, STABILIZED)

U.S. Dept of Transportation

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UN number UN3109
Class 5.2
Packing group II
Label 5.2 - Organic peroxide
8 - Corrosive
EmS 145
Proper shipping name:ORGANIC PEROXIDE TYPE F, LIQUID(PEROXYACETIC ACID, TYPE F, STABILIZED)

Canada (TDG)

UN number UN3109
Class 5.2
Packing group II
Label 5.2 - Organic peroxide
8 - Corrosive
EmS 145
Proper shipping name:ORGANIC PEROXIDE TYPE F, LIQUID(PEROXYACETIC ACID, TYPE F, STABILIZED)

15. REGULATORY INFORMATION

15.1. Inventory Information

USA. Toxic Substances Control Act (TSCA)	: -	In compliance with inventory.
Australia. Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canada. Domestic Substances List (DSL)	: -	In compliance with inventory.
Korean Existing Chemicals List (ECL)	: -	One or more components not listed on inventory.
EU list of existing chemical substances (EINECS)	: -	In compliance with inventory.
Japan. Inventory of Existing & New Chemical Substances (ENCS)	: -	In compliance with inventory.
Inventory of Existing Chemical Substances (China) (IECS)	: -	In compliance with inventory.
Philippine. Inventory of Chemicals and Chemical Substances (PICCS)	: -	In compliance with inventory.
New Zealand Inventory (in preparation) (NZ)	: -	All components on composite list considered for transfer.