1 Identification

· Product identifier

Trade name: <u>PureCide®E</u>
 Article number: 88341-1

· Recommended use and restriction on use

· Recommended use: Disinfectant

· Restrictions on use: Contact manufacturer.

· Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

Pureline Treatment Systems, LLC 1241 N. Ellis Street Bensenville, IL 60106 (847) 963-8465 INFO@PURELINE.COM

· Emergency telephone number:

ChemTel Inc. (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

· Classification of the substance or mixture



GHS03 Flame over circle

Ox. Liq. 1 H271 May cause fire or explosion; strong oxidizer.



GHS08 Health hazard

STOT RE 2 H373 May cause damage to the spleen through prolonged or repeated exposure.



GHS05 Corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

· Additional information:

Contact with acids liberates very toxic gas.

There are no other hazards not otherwise classified that have been identified.

0 percent of the mixture consists of ingredient(s) of unknown toxicity.

- · Label elements
- · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)



Trade name: PureCide®E

(Contd. of page 1)

· Hazard pictograms









GHS03 GHS05 GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

sodium chlorite

Hazard statements

H271 May cause fire or explosion; strong oxidizer.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to the spleen through prolonged or repeated exposure.

· Precautionary statements

P221 Take any precaution to avoid mixing with combustibles.

P283 Wear fire/flame resistant/retardant clothing.

P260 Do not breathe mist/vapours/spray.

P220 Keep/Store away from clothing and other combustible materials

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse

skin with water/shower.

P305+P351+P338 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/doctor.

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the

risk of explosion.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for

breathing.

P363 Wash contaminated clothing before reuse.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting. P314 Get medical advice/attention if you feel unwell.

P370+P378 In case of fire: Use for extinction: Water.

P391 Collect spillage. P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Additional information: Contact with acids liberates very toxic gas.

· Hazard description:

· WHMIS-symbols:

As of 11 February 2015, the current WHMIS system is being replaced by the GHS system. This is the classification under the older system.

C - Oxidizing materials

D1B - Toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

(Contd. on page 3)



Trade name: PureCide®E

E - Corrosive material

(Contd. of page 2)







- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 3Fire = 0Reactivity = 1

· HMIS-ratings (scale 0 - 4)



*3 Health = *3 3 Fire = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:			
7758-19-2	sodium chlorite	© Ox. Sol. 1, H271 STOT RE 2, H373 Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302	15-34%
7647-14-5	sodium chloride		1-6%
7775-09-9	sodium chlorate	© Ox. Sol. 1, H271	0-3%
7757-82-6	sodium sulphate		0-2%

· Additional information:

For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

(Contd. on page 4)



Trade name: PureCide®E

(Contd. of page 3)

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air; consult doctor in case of complaints.

Provide oxygen treatment if affected person has difficulty breathing.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After skin contact:

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

After eye contact:

Protect unharmed eye.

Remove contact lenses if worn, if possible.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· Information for doctor:

· Most important symptoms and effects, both acute and delayed

Breathing difficulty

Coughing

Thirst

Cvanosis

Methaemoglobinaemia

Caustic effect on skin and mucous membranes.

Nausea in case of ingestion.

Gastric or intestinal disorders when ingested.

Danger

Danger of gastric perforation.

Causes serious eye damage.

Danger of impaired breathing.

Danger of pulmonary edema.

May be harmful in contact with skin.

Harmful if swallowed.

May cause respiratory irritation.

May cause damage to the spleen through prolonged or repeated exposure.

· Indication of any immediate medical attention and special treatment needed

Contains sodium chlorite/chlorate. Consult literature for specific antidotes.

Medical supervision for at least 48 hours.

If necessary oxygen respiration treatment.

Later observation for pneumonia and pulmonary edema.

If blue coloring appears (lips, ear-lobes, finger-nails), give oxygen treatment as quickly as possible.

In cases of cyanosis, administer vitamin C, oxygen, protect from sunlight.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Water in flooding quantities.

(Contd. on page 5)



Trade name: PureCide®E

(Contd. of page 4)

· For safety reasons unsuitable extinguishing agents:

Foam

Extinguishing powder

Carbon dioxide

· Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

May intensify fire; oxidizer.

- Advice for firefighters
- Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

· Additional information

Evacuate area and fight fire from from the upwind side.

Cool endangered receptacles with water fog.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Avoid release to the environment.
- · Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Do not allow to dry out

Dispose contaminated material as waste according to item 13.

Send for recovery or disposal in suitable receptacles.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

Prevent formation of aerosols.

Protect from sunlight. Do not expose to temperatures exceeding 122 °F (50 °C).

· Information about protection against explosions and fires:

May intensify fire; oxidizer.

Emergency cooling must be available in case of nearby fire.

- · Conditions for safe storage, including any incompatibilities
- Storage:
- · Requirements to be met by storerooms and receptacles:

Store only in the original receptacle.

(Contd. on page 6)



Trade name: PureCide®E

(Contd. of page 5)

Store in a cool location.

Provide ventilation for receptacles.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Do not store together with acids.

Store away from reducing agents.

Store away from flammable substances.

· Further information about storage conditions:

Keep receptacle tightly sealed.

Photoreactive.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

- Engineering controls: Take any precaution to avoid mixing with combustibles.
- · Breathing equipment:

Not required under normal conditions of use.

Use suitable respiratory protective device when high concentrations are present.

Use suitable respiratory protective device when aerosol or mist is formed.

For large spills, respiratory protection may be advisable.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

 Material of gloves Nitrile rubber, NBR Neoprene gloves

(Contd. on page 7)



Trade name: PureCide®E

(Contd. of page 6)

PVC gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- · Not suitable are gloves made of the following materials: PVA gloves
- · Eye protection:



Safety glasses

- · Body protection: Alkaline resistant protective clothing
- · Limitation and supervision of exposure into the environment Avoid release to the environment.
- · Risk management measures See Section 7 for additional information.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Solution
Color: Light yellow
Odor: Chlorine-like
Odor threshold: Not determined.

· pH-value at 20 °C (68 °F): 12.5-13.0

· Change in condition

Melting point/Melting range:
Boiling point/Boiling range:
109 °C (228 °F)
109 °C (228 °F)
Not applicable.
Flammability (solid, gaseous):
Auto-ignition temperature:
Not determined.
Decomposition temperature:
Not determined.

Auto igniting: Product is not self-igniting.

• Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower: Not determined. Upper: Not determined.

Oxidizing properties
 Oxidizer

· Vapor pressure: Not determined.

• Density at 20 °C (68 °F): 1.28 g/cm³ (10.682 lbs/gal)

(Contd. on page 8)



Trade name: PureCide®E

(Contd. of page 7)

Relative density
Vapour density
Evaporation rate
Not determined.
Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined. **Kinematic:** Not determined.

• Other information No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:

Photoreactive.

Keep away from heat and direct sunlight.

Do not expose to temperatures exceeding 50 °C/122 °F.

· Possibility of hazardous reactions

Reacts with reducing agents.

Acts as an oxidizing agent on organic materials such as wood, paper and fats.

Contact with acids liberates very toxic gas.

Reacts with peroxides and other radical forming substances.

Reacts with various metals.

Toxic fumes may be released if heated above the decomposition point.

May produce violent reactions with bases and numerous organic substances including alcohols and amines.

- · Conditions to avoid Avoid acids.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products:

Chlorine

Chlorine compounds

chlorine dioxide.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

Oral LD50 350 mg/kg (mouse)

165 mg/kg (rat)

Dermal LD50 >2000 mg/kg (rabbit)

(Contd. on page 9)



Trade name: PureCide®E

(Contd. of page 8)

- · Primary irritant effect:
- · on the skin: Caustic effect on skin and mucous membranes.
- · on the eye: Strong caustic effect.
- Sensitization: No sensitizing effects known.
- · Subacute to chronic toxicity: No further relevant information available.
- · Additional toxicological information:

Toxic

Harmful

Corrosive

Danger through skin absorption.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- · Carcinogenic categories
- NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Probable Routes of Exposure

Inhalation.

Eve contact.

Skin contact.

Ingestion.

· Acute effects (acute toxicity, irritation and corrosivity):

Causes severe skin burns and eye damage.

May cause gastro-intestinal irritation if ingested.

May be harmful in contact with skin.

Harmful if swallowed.

· Repeated Dose Toxicity: May cause damage to the spleen through prolonged or repeated exposure.

12 Ecological information

- · Toxicity
- · Aquatic toxicity:

Very toxic to aquatic life.

LC50 0.29 mg/l (daphnia)

290 mg/l (Oncorhynchus mykiss)

- · Persistence and degradability Easily biodegradable
- · Behavior in environmental systems:
- · Bioaccumulative potential The product is not expected to bioaccumulate in soil or water organisms.
- · Mobility in soil No further relevant information available.
- · Ecotoxical effects:
- · Remark:

Very toxic for fish

Very toxic for water fleas.

Toxic for algae

(Contd. on page 10)



Trade name: PureCide®E

(Contd. of page 9)

- · Additional ecological information:
- · General notes:

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

- Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, ADR, IMDG, IATA

UN1908

· UN proper shipping name



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

· DOT, IATA

Chlorite solution

· ADR

1908 CHLORITE SOLUTION

· IMDG

CHLORITE SOLUTION

Transport hazard class(es)

· DOT



Class
 8 Corrosive substances

(Contd. on page 11)



Trade name: PureCide®E

· Label (Contd. of page 10)

· ADR

¥2>

· Class 8 (C9) Corrosive substances

· Label

· IMDG, IATA



Class
 8 Corrosive substances

· Label

· Packing group

· DOT, ADR, IMDG, IATA

· Environmental hazards:

· Marine pollutant:

· **Special marking (ADR):** Symbol (fish and tree)

Special precautions for user
 Warning: Corrosive substances

Danger code (Kemler):
 EMS Number:
 Segregation groups
 B0
 F-A,S-B
 Chlorites

· Transport in bulk according to Annex II of

MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

· DOT

• **Quantity limitations**On passenger aircraft/rail: 5 L
On cargo aircraft only: 60 L

· ADR

Excepted quantities (EQ)
 Code: E1

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

· IMDG

Limited quantities (LQ)
 Excepted quantities (EQ)
 Code: E4

Maximum net quantity per inner packaging: 1 ml Maximum net quantity per outer packaging: 500 ml

• UN "Model Regulation": UN1908, Chlorite solution, 8, III

(Contd. on page 12)



Trade name: PureCide®E

(Contd. of page 11)

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65 (California)
- · Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

7758-19-2 sodium chlorite

D, CBD

· Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

EPA Product Registration : 88341-1.

This chemical is a pesticide product registered by the 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. Following is the hazard information as required on the pesticide label:

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID

IF IN EYES:

Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

Call a poison control center or doctor for treatment advice if burning or irritation of skin persists.

IF SWALLOWED:

Have person sip a glass of water if able to swallow.

Call a poison control center or doctor immediately for treatment advice.

For emergency information call: 800-255-3924 (24 hours)

Have the product container or label with you when calling a poison control center or doctor or going to treatment.

NOTE TO PHYSICIAN:

Probable mucosal damage may contraindicate the use of gastric lavage.

STORAGE AND DISPOSAL

(Contd. on page 13)



Trade name: PureCide®E

(Contd. of page 12)

PESTICIDE STORAGE: Do not contaminate water, food or feed by storage or disposal. Keep product in tightly closed container when not in use. Don't drop, roll or skid drum. Keep upright. Always replace cover. Store in a cool, dry, well-ventilated area away from heat or open flame.

EMERGENCY HANDLING: In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and well-ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large quantities of water. Ay unopened drums near the fire should be cooled by spraying with water.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinste is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING:

For non-refillable solid container smaller than 50 lbs: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace adn tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning.

For non-refillable solid container that are larger than 50 lbs: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Offer reconditioning if appropriate. Triple Rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat the procedure two more times.

For refillable containers, all sizes. Refillable container. Refill this container with Technical Sodium Chlorite only. Do not reuse this container for any other purpose. Cleaning or pressure rinsing the container is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

collection system. Repeat this finding process two more times.	
· IARC (International Agency for Research on Cancer)	
7758-19-2 sodium chlorite	3
TLV (Threshold Limit Value established by ACGIH)	
None of the ingredients is listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	
· State Right to Know Listings	
Contact manufacturer.	
· Canadian substance listings:	
· Canadian Domestic Substances List (DSL)	
All ingredients are listed.	



(Contd. on page 14)

Trade name: PureCide®E

(Contd. of page 13)

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

7758-19-2 sodium chlorite

· Other regulations, limitations and prohibitive regulations

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

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Date of preparation / last revision 05/29/2015 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Liq. 1: Oxidising Liquids, Hazard Category 1 Ox. Sol. 1: Oxidising Solids, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B Skin Corr. 1C: Skin corrosion/irritation, Hazard Category 1C

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· Sources

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com

