

Safety Data Sheet

acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 05/29/2015

Reviewed on 05/29/2015

1 Identification

- **Product identifier**
- **Trade name:** PureVista
- **Article number:** 88228-1
- **Recommended use and restriction on use**
- **Recommended use:** Biocide
- **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**



GHS02 Flame

Water-react. 3 H261 In contact with water releases flammable gas.



GHS03 Flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidizer.



GHS08 Health hazard

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



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

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Combustible Dust May form combustible dust concentrations in air.

- **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).

- **Hazard pictograms**



GHS02 GHS03 GHS05 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

sodium chlorite

sodium hydrogensulphate

- **Hazard statements**

H261 In contact with water releases flammable gas.

H272 May intensify fire; oxidizer.

H290 May be corrosive to metals.

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

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

May form combustible dust concentrations in air.

- **Precautionary statements**

P221 Take any precaution to avoid mixing with combustibles.

P210 Keep away from heat.

P231+P232 Handle under inert gas. Protect from moisture.

P260 Do not breathe dust.

P220 Keep/Store away from clothing/combustible materials.

P264 Wash thoroughly after handling.

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

P234 Keep only in original container.

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

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

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.

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.

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P370+P378 In case of fire: Use for extinction: Water.
 P390 Absorb spillage to prevent material damage.
 P405 Store locked up.
 P406 Store in corrosive resistant container with a resistant inner liner.
 P402+P404 Store in a dry place. Store in a closed container.
 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.

B6 - Reactive flammable material

C - Oxidizing materials

D1B - Toxic material causing immediate and serious toxic effects

D2B - Toxic material causing other toxic effects

E - Corrosive material



- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 2

The substance demonstrates unusual reactivity with water.

- **HMIS-ratings (scale 0 - 4)**



Health = *2

Fire = 3

Reactivity = 2

- **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.

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· Dangerous components:

7681-38-1	sodium hydrogensulphate ☠ Eye Dam. 1, H318	25-40%
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	15-30%
9004-67-5	methylcellulose	10-20%
9003-04-7	sodium polyacrylate	7-20%

· 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.

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

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

Take affected persons out into the fresh air.

· 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:

Brush off loose particles from skin.

Treat affected skin with cotton wool or cellulose. Then wash and rinse thoroughly with water and a mild cleaning agent.

If skin irritation continues, consult a doctor.

Launder contaminated clothing before re-use.

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

Cyanosis

Methaemoglobinaemia

Irritant to skin and mucous membranes.

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Strong irritant with the danger of severe eye injury.
 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.
 - Repeated exposure may cause skin dryness or cracking.
 - Coughing and wheezing from inhalation of large quantities of dust.
 - May cause respiratory irritation.
 - Harmful if swallowed.

- **Indication of any immediate medical attention and special treatment needed**

Medical supervision for at least 48 hours.
 Later observation for pneumonia and pulmonary edema.
 If blue coloring appears (lips, ear-lobes, finger-nails), give oxygen treatment as quickly as possible.
 If necessary oxygen respiration treatment.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Water in flooding quantities.
- **For safety reasons unsuitable extinguishing agents:**
 - Foam
 - Carbon dioxide
 - Gaseous extinguishing agents
 - Extinguishing powder
- **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.
 - Do not inhale explosion gases or combustion gases.
 - Wear fully protective suit.
- **Additional information**
 - Eliminate all ignition sources if safe to do so.
 - Cool endangered receptacles with water in flooding quantities.
 - Evacuate area and fight fire from from the upwind side.

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.
 - Avoid formation of dust.

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- Do not breathe dust.
- **Environmental precautions:** Avoid release to the environment.
- **Methods and material for containment and cleaning up:**
Pick up mechanically.
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.
Keep away from heat and direct sunlight.
Prevent formation of dust.
Any deposit of dust which cannot be avoided must be regularly removed.
- **Information about protection against explosions and fires:**
May intensify fire; oxidizer.
Dust can combine with air to form an explosive mixture.
During heating or in case of fire poisonous gases are produced.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Store only in the original receptacle.
Provide ventilation for receptacles.
Protect from humidity and water.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from reducing agents.
Do not store together with acids.
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store under dry inert gas.
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.

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- **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:** No further relevant information available.
- **Breathing equipment:**
Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded.
Use suitable respiratory protective device when high concentrations are present.
For spills, respiratory protection may be advisable.
Particulate mask should filter at least 99% of airborne particles.
- **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
Butyl rubber, BR
Neoprene gloves
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:** Protective work clothing
- **Limitation and supervision of exposure into the environment** Avoid release to the environment.

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· Risk management measures See Section 7 for additional information.

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Granulate

Color: White

· Odor: Chlorine-like

· Odor threshold: Not determined.

· pH-value (1 g/l) at 20 °C (68 °F): 6.0-7.0

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Decomposes.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Contact with combustible material may cause fire.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: 180 °C (356 °F)

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Not determined.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Contains oxidizing agent.

· Vapor pressure: Not applicable.

· Density at 20 °C (68 °F): 1.5 g/cm³ (12.518 lbs/gal)

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with

Water: Soluble.

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

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

· Other information: No further relevant information available.

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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.
Contact with acids liberates very toxic gas.
Toxic fumes may be released if heated above the decomposition point.
Acts as an oxidizing agent on organic materials such as wood, paper and fats.
Reacts with peroxides and other radical forming substances.
Contact with water releases flammable gases.
Reacts with certain metals.
- **Conditions to avoid**
Avoid acids.
Moisture.
- **Incompatible materials:** Reducing agents, combustible materials, moisture, contact with metals.
- **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Chlorine
Chlorine compounds
Chlorine dioxide.
Sulfur oxides (SOx)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Dermal	LD50	>5000 mg/kg (rat) (100 ppm chlorine dioxide solution)
Inhalative	LC50/4h	>2.07 mg/l (rat) (200 ppm chlorine dioxide solution)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:** No further relevant information available.
- **Additional toxicological information:**
Harmful
Irritant
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.

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- **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.

Eye contact.

Skin contact.

Ingestion.

- **Acute effects (acute toxicity, irritation and corrosivity):**

Causes severe skin burns and eye damage.

Harmful if swallowed.

Harmful if inhaled.

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

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** The product contains materials that are harmful to the environment.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:**

Toxic for fish

Toxic for water fleas

- **Additional ecological information:**

- **General notes:**

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

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

- **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.

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.

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

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN2813
- **UN proper shipping name**



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 kg (11 lb.)

- **DOT** Water-reactive solid, n.o.s. (Activated sodium chlorite)
- **ADR** 2813 WATER-REACTIVE SOLID, N.O.S. (Activated Sodium Chlorite)
- **IMDG** WATER-REACTIVE SOLID, N.O.S. (Activated Sodium Chlorite)
- **IATA** Water-reactive solid n.o.s. (Activated Sodium Chlorite)
- **Transport hazard class(es)**

- **DOT**



- **Class** 4.3 Substances which, in contact with water, emit flammable gases
- **Label** 4.3

- **ADR**



- **Class** 4.3 (W2) Substances which, in contact with water, emit flammable gases
- **Label** 4.3

- **IMDG, IATA**



- **Class** 4.3 Substances which, in contact with water, emit flammable gases
- **Label** 4.3
- **Packing group**
- **DOT, ADR, IMDG, IATA** III
- **Environmental hazards:**
- **Marine pollutant:** No

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- **Special marking (ADR):** Symbol (fish and tree)
 - **Special precautions for user** Warning: Substances which, in contact with water, emit flammable gases
 - **Danger code (Kemler):** 423
 - **EMS Number:** F-G,S-N
 - **Segregation groups** 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: 25 kg
On cargo aircraft only: 100 kg
-
- **ADR**
 - **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
 - **UN "Model Regulation":** UN2813, Water-reactive solid, n.o.s., 4.3, III

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

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· 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.

· Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)	
7681-38-1	sodium hydrogensulphate
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)

HMS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Water-react. 3: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 3

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

Ox. Sol. 2: Oxidising Solids, Hazard Category 2

Met. Corr.1: Corrosive to metals, Hazard Category 1

Acute Tox. 4: Acute toxicity, Hazard Category 4

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

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:

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