

SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

Pulsar pH Down (+4)

Version 2.8

Revision Date 2020.11.20

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SECTION 1. IDENTIFICATION

Product name : Pulsar pH Down (+4)

Manufacturer or supplier's details

Company : Innovative Water Care, LLC
1400 Bluegrass Lakes Parkway
Alpharetta, GA
30004

Telephone : 1-800-511-6737 (Outside the USA: 1-423-780-2347)
E-mail address : sds@sigurawater.com
Emergency telephone number : 1-800-654-6911 (Outside the USA: 1-423-780-2970)

Recommended use of the chemical and restrictions on use

Recommended use : Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin corrosion : Category 1

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.

Precautionary statements : **Prevention:**
P260 Do not breathe dust or mist.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/
face protection.
Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT

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induce vomiting.

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

P363 Wash contaminated clothing before reuse.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

| Chemical name / Synonyms | CAS-No. | Concentration (% w/w) |
|-----------------------------------|------------|-----------------------|
| Sodium hydrogensulphate | 7681-38-1 | 85 - 95 |
| Aluminum sulfate tetradecahydrate | 16828-12-9 | 2 - 5 |

SECTION 4. FIRST AID MEASURES

- If inhaled : Remove to fresh air.
Get medical attention if symptoms occur.
If not breathing, give artificial respiration.
- In case of skin contact : Wash off immediately with plenty of water.
Call a physician if irritation develops or persists.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Call a physician immediately.
- If swallowed : Do not induce vomiting. Drink water. Call physician immediately.
- Most important symptoms and effects, both acute and delayed : None known.

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Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Choose extinguishing media suitable for surrounding materials.

Specific hazards during firefighting : Material will not ignite or burn.

Further information : Use water spray to cool unopened containers.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Avoid dust formation.
Use personal protective equipment.
Stop source of spill as soon as possible and notify appropriate personnel.
Utilize emergency response personal protection equipment prior to the start of any response.
Evacuate all non-essential personnel.
For disposal considerations see section 13.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Sweep up and shovel into suitable containers for disposal.
Do not flush into surface water or sanitary sewer system.
Avoid dust formation.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation.

Advice on safe handling : Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water.
Avoid creating dusts.

Conditions for safe storage : Store in a cool, dry and well ventilated place.
Keep tightly closed.
Avoid contact with water, or moist air.

Materials to avoid : Refer to Section 10, "Incompatible Materials."

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : Local exhaust ventilation is recommended if significant dusting occurs. Otherwise use general exhaust ventilation.

Personal protective equipment

Respiratory protection : If dusting occurs, wear a NIOSH approved respirator.

Filter type : Wear a NIOSH approved N95 respirator.

Hand protection

Remarks : Wear suitable gloves. 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).

Eye protection : Use chemical goggles.

Skin and body protection : butyl-rubber
Neoprene

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : granular

Colour : off-white

Odour : pungent

Odour Threshold : no data available

pH : < 2
solution

Melting point/freezing point : no data available

Boiling point/boiling range : no data available

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| | | |
|--|---|-------------------|
| Flash point | : | Not applicable |
| Evaporation rate | : | Not applicable |
| Flammability (solid, gas) | : | no data available |
| Flammability (liquids) | : | no data available |
| Self-ignition | : | Not applicable |
| Upper explosion limit | : | no data available |
| Lower explosion limit | : | no data available |
| Vapour pressure | : | Not applicable |
| Relative vapour density | : | Not applicable |
| Relative density | : | no data available |
| Density | : | no data available |
| Bulk density | : | no data available |
| Water solubility | : | no data available |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Auto-ignition temperature | : | no data available |
| Decomposition temperature | : | no data available |
| Viscosity, dynamic | : | no data available |
| Viscosity, kinematic | : | no data available |
| Oxidizing properties | : | Not applicable |
| Oxidizing potential | : | Not relevant |

SECTION 10. STABILITY AND REACTIVITY

| | | |
|------------------------------------|---|--|
| Reactivity | : | Stable under recommended storage conditions. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | Product will not undergo hazardous polymerization. |
| Conditions to avoid | : | High temperatures |
| Incompatible materials | : | Strong oxidizing agents |

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Bases

Hazardous decomposition products : Oxides of sulfur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral toxicity : Remarks: no data available

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

Skin corrosion/irritation

Remarks: The dry material is irritating to the skin. However when wet, it will produce burns to the skin.

Serious eye damage/eye irritation

Remarks: Causes serious eye damage.

Respiratory or skin sensitisation

Remarks: Not believed to be sensitising to skin.

Carcinogenicity

IARC

No component 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 component 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 component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish : Remarks: no data available

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Persistence and degradability

Biodegradability : Result: no data available

Bioaccumulative potential

Bioaccumulation : Remarks: no data available

Remarks: no data available

Mobility in soil

Distribution among environmental compartments : Remarks: no data available

Other adverse effects

Ozone-Depletion Potential : Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B)
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : Slightly toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : If this product becomes a waste, it will be a nonhazardous waste.
As a nonhazardous solid waste it should be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

: Not dangerous goods

UN number : Not applicable

Proper shipping name : Not applicable

Transport hazard class : Not applicable

Packing group : Not applicable

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| | | |
|---|---|---------------------|
| TDG | : | Not dangerous goods |
| UN number | : | Not applicable |
| Proper shipping name | : | Not applicable |
| Transport hazard class | : | Not applicable |
| Packing group | : | Not applicable |
| IATA | : | Not dangerous goods |
| UN number | : | Not applicable |
| Proper shipping name | : | Not applicable |
| Transport hazard class | : | Not applicable |
| Packing group | : | Not applicable |
| IMDG | : | Not dangerous goods |
| UN number | : | Not applicable |
| Proper shipping name | : | Not applicable |
| Transport hazard class | : | Not applicable |
| Packing group | : | Not applicable |
| ADR | : | Not dangerous goods |
| UN number | : | Not applicable |
| Proper shipping name | : | Not applicable |
| Transport hazard class | : | Not applicable |
| Packing group | : | Not applicable |
| RID | : | Not dangerous goods |
| UN number | : | Not applicable |
| Proper shipping name | : | Not applicable |
| Transport hazard class | : | Not applicable |
| Packing group | : | Not applicable |
| Special precautions for user | : | none |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | : | Not applicable |

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity



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| Components | CAS-No. | Component RQ (lbs) | Calculated product RQ (lbs) |
|-----------------------------------|------------|--------------------|-----------------------------|
| Aluminum sulfate tetradecahydrate | 16828-12-9 | 5000 | * |

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCOMI Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

| Components | CAS-No. | Component RQ (lbs) |
|-----------------------------------|------------|--------------------|
| Aluminum sulfate tetradecahydrate | 16828-12-9 | 5000 |

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

| Components | CAS-No. | Concentration |
|-----------------------------------|------------|---------------|
| Aluminum sulfate tetradecahydrate | 16828-12-9 | 2 - 5 % |

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

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Massachusetts Right To Know

| Components | CAS-No. |
|-----------------------------------|------------|
| Aluminum sulfate tetradecahydrate | 16828-12-9 |
| Sodium sulphate | 7757-82-6 |

Pennsylvania Right To Know

| Components | CAS-No. |
|-----------------------------------|------------|
| Sodium hydrogensulphate | 7681-38-1 |
| Aluminum sulfate tetradecahydrate | 16828-12-9 |
| Sodium sulphate | 7757-82-6 |

New Jersey Right To Know

| Components | CAS-No. |
|-----------------------------------|------------|
| Sodium hydrogensulphate | 7681-38-1 |
| Aluminum sulfate tetradecahydrate | 16828-12-9 |
| Sodium sulphate | 7757-82-6 |

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

The components of this product are reported in the following inventories:

TSCA : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dan-

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gerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 2020.11.20

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Date format : yyyy/mm/dd

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