		Page: 1
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

## SECTION 1. IDENTIFICATION

### Product identifier

Trade name : PULSAR PH DOWN (+4)

### Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture : adjuvant

<b>Details of the supplier of the safety data sheet</b> Innovative Water Care, LLC 1400 Bluegrass Lakes Parkway Alpharetta, GA 30004 United States of America (USA)  EHSProductSafetyTeam@solenis.com	<b>Emergency telephone number</b> 1-800-654-6911 (Outside the USA:1-423-780-2970)  <b>Product Information</b> 1-800-511-6737 (Outside the USA:1-423-780-2347)
---	---

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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.  
 P264 Wash skin thoroughly after handling.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT

		Page: 2
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)  248133		Version: 1.1

induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
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.  
P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

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

**Other hazards**

None known.

---

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Classification	Concentration (%)
SODIUM BISULFATE	7681-38-1	Eye Dam. 1; H318	>= 80 - < 90
ALUMINUM SULPHATE, HYDRATE	16828-12-9	Eye Dam. 1; H318	>= 1.5 - < 5

Actual concentration is withheld as a trade secret


---

**SECTION 4. FIRST AID MEASURES**

General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.

If inhaled : Move to fresh air.  
If breathed in, move person into fresh air.  
Keep patient warm and at rest.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.

In case of skin contact : If on skin, rinse well with water.

		Page: 3
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

Wash contaminated clothing before re-use.

- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.
- If swallowed : Get medical attention immediately.  
Do NOT induce vomiting.  
Rinse mouth with water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:  
stomach or intestinal upset (nausea, vomiting, diarrhea)  
irritation (nose, throat, airways)  
Causes serious eye damage.  
Causes severe burns.
- Notes to physician : No hazards which require special first aid measures.


---

## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : sulfur compounds  
Sodium oxides  
sulfur oxides
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

		Page: 4
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Avoid dust formation.  
Avoid breathing dust.  
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.  
Comply with all applicable federal, state, and local regulations.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.

---

## SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Avoid dust formation.  
Take measures to prevent the build up of electrostatic charge.  
Provide appropriate exhaust ventilation at places where dust is formed.
- Advice on safe handling : Avoid dust formation.  
Do not breathe vapours/dust.  
When diluting, always add the product to water. Never add water to the product.  
Container hazardous when empty.  
Avoid contact with skin and eyes.  
Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.


---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

- Engineering measures** : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or

		Page: 5
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

apparent adverse effects.

Provide appropriate exhaust ventilation at places where dust is formed.

### Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles and face shield to protect eyes and skin from airborne dust.  
Maintain eye wash station in immediate work area.

Skin and body protection : Wear as appropriate:  
Chemical resistant apron  
Safety shoes  
Dust impervious protective suit  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.  
Wear resistant gloves (consult your safety equipment supplier).  
Discard gloves that show tears, pinholes, or signs of wear.

Hygiene measures : Avoid breathing dust.  
Wash hands before breaks and at the end of workday.  
When using do not eat or drink.  
Ensure that eyewash stations and safety showers are close to the workstation location.  
When using do not smoke.

---

### 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

		Page: 6
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Not combustible Dust

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : Not applicable

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Oxidizing properties : No data available

Particle size : No data available

---


## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : Heat  
Exposure to moisture

		Page: 7
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

Keep away from heat, flame, sparks and other ignition sources.

Incompatible materials : Alkali metals  
Alkaline earth metals  
aluminum  
magnesium  
Oxidizing agents  
Strong acids  
Strong bases

Hazardous decomposition products : Sulphur compounds  
Sodium oxides  
Sulphur oxides

---

## SECTION 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Not classified based on available information.

### Components:

#### **SODIUM BISULFATE:**

Acute oral toxicity : Remarks: Corrosive by Ingestion

Acute inhalation toxicity : Remarks: Corrosive to respiratory system.

#### **ALUMINUM SULPHATE, HYDRATE:**

Acute oral toxicity : LD50 (Rat): 6,207 mg/kg

### **Skin corrosion/irritation**

Causes severe burns.

### Product:

Remarks : Causes severe skin burns and eye damage.

### Components:

#### **SODIUM BISULFATE:**


Result : Possibly irritating to skin

#### **ALUMINUM SULPHATE, HYDRATE:**

Result : Not irritating to skin

### **Serious eye damage/eye irritation**

Causes serious eye damage.

		Page: 8
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

**Product:**

Remarks : May cause irreversible eye damage.

**Components:**

**SODIUM BISULFATE:**

Species : Rabbit  
 Result : Corrosive to eyes  
 Method : OECD Test Guideline 405

**ALUMINUM SULPHATE, HYDRATE:**

Species : Rabbit  
 Result : Risk of serious damage to eyes.

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**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.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**


Not classified based on available information.

**Further information**

**Product:**

Remarks : No data available



		Page: 9
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)  248133		Version: 1.1

---

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

#### Ecotoxicology Assessment

Acute aquatic toxicity : Not classified based on available information.

Chronic aquatic toxicity : Not classified based on available information.

#### Persistence and degradability

#### Components:

#### ALUMINUM SULPHATE, HYDRATE:

Biodegradability : Result: The methods for determining biodegradability are not applicable to inorganic substances.

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Other adverse effects

#### Product:

Additional ecological information : No data available

---


## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

 <b>SOLENIS</b> <small>Strong bonds. Trusted solutions.</small>		Page: 10
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

---

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### 49 CFR

Not regulated as a dangerous good

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

---

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ALUMINUM SULPHATE, HYDRATE	16828-12-9	5000	151515

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.


**SARA 311/312 Hazards** : Skin corrosion or irritation  
 Serious eye damage or eye irritation

**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.

### US State Regulations

#### Massachusetts Right To Know

SODIUM SULFATE	7757-82-6
ALUMINUM SULPHATE, HYDRATE	16828-12-9

		Page: 11
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

**Pennsylvania Right To Know**

sodium hydrogensulphate	7681-38-1
SODIUM SULFATE	7757-82-6
ALUMINUM SULPHATE, HYDRATE	16828-12-9

**New Jersey Right To Know**

sodium hydrogensulphate	7681-38-1
SODIUM SULFATE	7757-82-6
ALUMINUM SULPHATE, HYDRATE	16828-12-9

**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.

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

- TCSI : On the inventory, or in compliance with the inventory
- TSCA : All substances listed as active on the TSCA inventory
- AIIC : On the inventory, or in compliance with the inventory
- DSL : All components of this product are on the Canadian DSL
- ENCS : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**SECTION 16. OTHER INFORMATION**

**Further information**

Revision Date : 02/22/2023


**Full text of H-Statements**

H318 : Causes serious eye damage.

**Full text of other abbreviations**

Eye Dam. : Serious eye damage

AIIC - Australian Inventory of Industrial Chemicals; 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 -

		Page: 12
<b>SAFETY DATA SHEET</b>		Revision Date: 02/22/2023
		Print Date: 04/17/2023
		SDS Number: R1600456
PULSAR PH DOWN (+4)		Version: 1.1
248133		

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 Dangerous 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; TECI - Thailand Existing Chemicals 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

#### Sources of key data used to compile the Safety Data Sheet

Key literature references and sources of data

SOLENIS Internal data

SOLENIS internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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. This SDS has been prepared by the Solenis Environmental Health and Safety Department.

US / EN