

Safety Data Sheet



Advanced Nutrients pH-Down

Section 1. Identification

GHS product identifier	: Advanced Nutrients pH-Down
Other means of identification	: Product Code: 3800 Formula Code: 001A
Recommended use of the chemical and restriction on use	: A solution used to maintain optimum pH level for proper plant growth when the pH of the nutrient solution or growing medium gets too high. Not to be used as food or feed in any forms.
Supplier/Manufacturer's details	: Advanced Nutrients U.S. LLC 8687 Melrose Ave, Suite G320, West Hollywood, CA 90069 Tel: 833.420.2902 Email: info@advancednutrients.com www.advancednutrients.com
Emergency Phone number	: CHEMTREC Emergency Phone Numbers: 1-800-424-9300 (North America, including Canada and Mexico) CCN 613830 1-703-527-3887 (International) CCN 613830

Section 2. Hazard Identification

GHS classification of the substance/mixture	: Skin Corrosion -1B, Serious eye damage-1, Acute toxicity (oral)-4, Corrosive to metals-1
GHS label elements	
Pictogram symbol	: 
Signal word	: Danger
Hazard statement	: Causes severe skin burn or eye damage, Harmful to swallowed, May be corrosive to metals.
Precautionary statement	
General	: Read label before use. Keep out of reach of children If medical advice is needed, have product container/label at hand.
Prevention	: Keep only in original packaging. Wash skin thoroughly after handling.

Response	<p>Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection /face protection.</p> <p>: If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. Do not induced vomiting</p> <p>If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of water.</p> <p>If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor.</p> <p>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.</p>
Storage	: Store in cool and dry place. Store locked up.
Disposal	: Dispose of contents and container in accordance with local, regional, national and international regulations.
Other hazards (not covered the GHS)	: Not known.

Section 3. Composition/Information on Ingredients

Substance/Mixture	: Mixture
Chemical identity	: Not applicable
Common name/synonym	: Not available
CAS number and other unique identifiers	: Not applicable
Impurities and stabilizing additives	: Not applicable

Ingredient name	CAS number	% (w/w)	Classification according to OSHA Laws & EU Regulations
Phosphoric acid	7664-38-2	60-80	Classified as toxic and hazardous substance on 29 CFR - 1910 Subpart Z: Table Z-1.

The chemical identity of the remaining ingredients and their exact proportions used in the mixture are a proprietary trade secret (protected by the Confidential Business Information –CBI) and, within the current knowledge of the manufacturer and in the concentration applicable, they are not hazardous to health or the environment.

Section 4. First-aid Measures

Description of necessary measures

Self-protection of first-aiders : Not available

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

Inhalation : If unconscious, place in recovery position and seek medical advice.

Skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Take victim immediately to hospital. If on skin, rinse well with water. If on clothes, remove clothes.

Eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eye, rinse immediately with plenty of water and seek medical advice. Continue rinsing eyes during transport to hospital. Remove contact lenses. Protect unharmed eye.

Ingestion : Clean mouth with water and drink afterwards plenty of water. Keep respiratory tract clear. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

Most important symptoms/effects, acute and delayed:

Inhalation : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact : Immediate severe skin burn due to skin contact.

Eye contact : If in eyes it causes severe eye irritation.

Ingestion : Irritating to mouth, throat and stomach.

Indication of immediate medical attention and special treatment needed:

Notes to physician : Probable mucosal damage may contraindicate the use of gastric lavage.

Specific treatments : No specific treatment.

See also toxicological information (Section 11).

Section 5. Fire-fighting Methods

Suitable extinguishing media : Use an extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Not available.

Specific hazards arising from the chemical	: Phosphorous oxides. Toxic fumes. Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Special protective precautions for fire-fighters	: No special protection is required.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Use personal protective equipment.

For emergency personnel : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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 clean up

Small and large spills : Neutralize with chalk, alkali solution or ammonia. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

Section 7. Handling and Storage

Precautions for safe handling

Advice on general hygiene : Normal measures for preventive fire protection.

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage and any incompatibilities : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully

released and kept upright to prevent leakage. Observe label precautions. Electrical installations/working materials must comply with the technological safety standards. Do not store near acids.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits : Contains no substance with occupational exposure limit values.

Biological limit values : None.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Personal Protective Equipment (PPE) : PPE should be used in conjunction with other control measures, including engineering controls, ventilation and isolation. See Section 5 (Fire-fighting measures) of the SDS for specific fire/chemical PPE advice.

Eye/face protection : Eye wash bottle with pure water. Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems.

Skin protection : Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : No personal respiratory protective equipment normally required. In case of vapour formation use a respirator with an approved filter.

Thermal hazards : None.

Section 9. Physical and Chemical Properties

Appearance (physical state)	: Clourless viscous liquid.
Odor	: Odourless
Odor threshold	: Oderless
pH	: 1 @20°C (68°F)
Melting point/Freezing point	: -17°C(0.5°F)
Initial boiling point and boiling range	: 135°C (275°F)
Flash point	: Not applicable
Evaporation rate	: Not available
Flammability (solid, gas)	: Not flammable
Upper/lower flammability or explosive limits	: Not applicable
Vapor pressure	: 1.62 – 4.17 mmHg @20°C (68°F)
Vapor density	: Not available
Density	: >1.572 g/mL @20°C (68°F)
Solubility (ies)	: Miscible in cold water
Partition coefficient: n-octanol/water	: Not available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
Viscosity	: Not available

Section 10. Stability and Reactivity

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Normally stable.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Alkalis, phosphorous compounds, cyanides, carbide, mercaptants, glass, steel, metals.
Hazardous decomposition products	: Oxides of phosphorous, toxic fumes.

Section 11. Toxicological Information

Acute toxicity				
Ingredient	Toxicity	Species	Dose	Remark
Phosphoric acid	Oral LD50	Dog	322.88-492.77 mg/kg bw	ECHA
		Rat	155 mg/kg bw	
	Inhalation LC50	Not available	Not available	
	Dermal LD50	Rabbit	2740 mg/kg bw	
Skin corrosion/irritation		:	It causes severe skin burn.	
Serious eye damage/ irritation		:	It causes severe eye damage.	
Respiratory or skin sensitization		:	No data available.	
Germ cell mutagenicity		:	No data available.	
Carcinogenicity		:	No data available.	
Reproductive toxicity		:	No data available.	
STOT-single exposure		:	No data available.	
STOT-repeated exposure		:	No data available.	
Aspiration hazard		:	No data available.	
The Likely routes of exposure, health effects and Symptoms related to the physical, chemical and toxicological characteristics				
Eye contact		:	Corrosive to eye tissue and may cause severe damage and blindness.	
Inhalation		:	Mists may cause irritation of upper respiratory tract. Coughing, shortness of breath, headaches and confusion may occur. Vapours may cause pulmonary edema.	
Skin contact		:	It causes sever skin irritation. Causes burns.	
Ingestion		:	It is harmful if ingested. Irritating to mouth, throat and stomach. There is no known health effect.	
Delayed and immediate effects and also chronic effects from short or long term exposure				
Short-term exposure				
Potential immediate effects		:	No data available.	
Potential delayed effects		:	No data available.	
Long-term exposure				
Potential immediate effects		:	No data available.	
Potential delayed effects		:	No data available.	
Potential Chronic health effect		:	No data available.	
Numerical measures of toxicity				
Acute toxicity estimate				
Oral		:	No data available.	
Inhalation of vapors		:	No data available.	

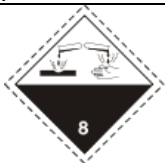
Section 12. Ecological Information

Toxicity				
Ingredient name	Result	Species	Exposure	Reference
Phosphoric acid	LC50 3-3.25mg/L	Bluegill sunfish	96 hours	
	EC50 >100mg/L	Daphnia magna	48 hours	
	EC50 >100 mg/L	Algae	72 hours	
Persistence and degradability	: No data available.			
Bio accumulative potential	: No data available.			
Mobility in soil	: No data available.			
Other adverse effects	: No data available.			

Section 13. Disposal Considerations

Disposal of waste methods	: Dispose in accordance with all applicable local, state and federal regulations.
Contaminated packaging	: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

Section 14. Transport Information

Identification of ingredients according to UN Model Regulations	
UN number	1805
UN proper shipping name	Phosphoric acid solution
Transport hazard class(es)	 8
Packing group	III
Special precaution for user	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk	Not applicable ($\leq$ 1000L-container).

Environmental hazards

Ingredient's name	IMDG	UN	ADR	RID	ADN
Phosphoric acid	Yes	Yes	Yes	Yes	Yes

Section 15. Regulatory Information

Safety, health and environmental regulations specific for the product in question	:	On TSCA Inventory All components of this product are on the Canadian DSL
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Section 16. Other Information

Prepared by	:	Department of Product Development, Advanced Nutrients Ltd., Canada
Date of preparation (d/m/y)	:	31/01/2016
Version	:	8
Date of Revision	:	24/04/2025
Revised Sections	:	All except Section 1 and 14.
Key Acronyms:		
ADN	:	The European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways
ADR	:	The European Agreement concerning the International Carriage of Dangerous Goods by Road
BW	:	Body Weight
IATA	:	International Air Transport Association shipment of Dangerous Goods Regulation
IMDG	:	International Maritime Dangerous Goods code
RID	:	The Regulation concerning the International Carriage of Dangerous Goods by Rail
SDS	:	Safety Data Sheet
Key Literature References:		
Convention concerning International Carriage by Rail (COTIF) Appendix C – Regulation concerning the International Carriage of Dangerous Goods by Rail (RID), with effect from 1 January 2013. Intergovernmental Organization for International Carriage by Rail (OTIF). Berne, Switzerland, 2012.		
European Chemical Agency (ECHA) 2015. Information on Chemicals: Registered substances http://echa.europa.eu/information-on-chemicals/registered-substances . Online Database. Accessed on March 16, 2015.		
European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways (ADN), including the Annexed Regulations, applicable as from 1 January 2013. Volume I and Volume II. ECE/TRANS/231 (Vol. I & II). UN Economic Commission for Europe-Committee on Inland Transport. New York and Geneva, 2012.		
European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), applicable as from 1 January 2013. Volume I and Volume II. ECE/TRANS/225 (Vol. I & II). United Nations Economic Commission for Europe-Committee on Inland Transport, New York and Geneva, 2012.		

Globally Harmonized System of Classification and Labelling of Chemicals. 5th Edition. ST/SG/AC. 10.30/Rev. 5. United Nations, New York and Geneva, 2013.

Guidance on Labelling and Packaging Regulation in Accordance with EU Regulation 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation). European Chemical Agency, Finland, 2011.

International Maritime Dangerous Goods (IMDG) Code Volume 1 and 2. Incorporating Amendment 33-06, 2006 Edition. International Maritime Organization. London, 2006.

OSH Answers Fact Sheets. Canadian Centre for Occupational Health and Safety. http://www.ccohs.ca/oshanswers/chemicals/oxidizing/oxidizing_hazards.html
Accessed on April 08, 2015.

OSHA Law and Regulations. Occupational Safety and Health Standards 29 CFR: 1910. <https://www.osha.gov/law-regs.html> Accessed on April 15, 2015.

Recommendations on the Transport of Dangerous Goods – Manual of Test and Criteria. 5th Edition. ST/SG/AC. 10/11/Rev. 5. United Nations, New York and Geneva, 2009.

Recommendations on the Transport of Dangerous Goods – Model Regulations. 18th Edition. Volume I and II. ST/SG/AC. 10/1/Rev. 18. UN, New York and Geneva, 2013.

Regulation (EC) No. 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Official Journal of the European Union L 353/1. 2008.

Others : The data here is for hazard communication to our employees, our customers and their employees and authorized regulatory agencies. For the intended purpose, this SDS may be duplicated or the data transcribed to an alternative form.

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