


# Safety Data Sheet

## Advanced Nutrients pH-Down

### Section 1. Identification

<b>GHS product identifier</b>	: Advanced Nutrients pH-Down
<b>Other means of identification</b>	: Product Code: 3800 Formula Code: 001A
<b>Recommended use of the chemical and restriction on use</b>	: 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.
<b>Supplier/Manufacturer's details</b>	: Advanced Nutrients U.S. LLC 8687 Melrose Ave, Suite G320, West Hollywood, CA 90069 Tel: (877) 604-8637 Email: <a href="mailto:info@advancednutrients.com">info@advancednutrients.com</a> <a href="http://www.advancednutrients.com">www.advancednutrients.com</a>
<b>Emergency Phone number</b>	: CHEMTREC Emergency Phone Numbers: 1-800-424-9300 (North America, including Canada and Mexico) 1+703-527-3887 (International)

### Section 2. Hazard Identification

<b>GHS classification of the substance/mixture</b>	: Skin Corrosion -1B
<b>GHS label elements</b>	
<b>Pictogram symbol</b>	: 
<b>Signal word</b>	: Danger
<b>Hazard statement</b>	: Causes severe skin burn or eye damage.
<b>Precautionary statement</b>	
<b>General</b>	: Read label before use. Keep out of reach of children If medical advice is needed, have product container/label at hand.
<b>Prevention</b>	: Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection /face protection. Do not breathe dust/fume/gas/mist/vapours/ spray.

<b>Response</b>	: If swallowed: Rinse mouth. Do not induced vomiting If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of water. Wash contaminated clothings before use. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	: Store in cool and dry place. Store locked up.
<b>Disposal</b>	: Dispose of contents and container in accordance with local, regional, national and international regulations.
<b>Other hazards (not covered the GHS)</b>	: Not applicable.

### Section 3. Composition/Information on Ingredients

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

<b>Ingredient name</b>	<b>CAS number</b>	<b>% (w/w)</b>	<b>Classification according to OSHA Laws &amp; EU Regulations</b>
Phosphoric acid	7664-38-2	60-90	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

<b>Description of necessary measures</b>	
<b>Self-protection of first-aiders</b>	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.
<b>General information</b>	: Remove contaminated clothing immediately. In case of accident or unwellness, seek medical attention immediately.

<b>Inhalation</b>	: Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
<b>Skin contact</b>	: Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
<b>Eye contact</b>	: Check for and remove any contact lenses. Flush immediately with water for at least 15 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.
<b>Ingestion</b>	: Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomit. Give a cup of water to dilute. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
<b>Most important symptoms/effects, acute and delayed:</b>	
<b>Inhalation</b>	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Skin contact</b>	: Immediate severe skin burn due to skin contact.
<b>Eye contact</b>	: If in eyes it causes severe eye irritation.
<b>Ingestion</b>	: Irritating to mouth, throat and stomach.
<b>Indication of immediate medical attention and special treatment needed:</b>	
<b>Notes to physician</b>	: Probable mucosal damage may contraindicate the use of gastric lavage.
<b>Specific treatments</b>	: No specific treatment.

See also toxicological information (Section 11).

## Section 5. Fire-fighting Methods

<b>Suitable extinguishing media</b>	: Where fire is involved use any fire fighting agent that is appropriate extinguishing media for material that is supplying the fuel to the fire.
<b>Unsuitable extinguishing media</b>	: Do not use water jet.
<b>Specific hazards arising from the chemical</b>	: Decomposition products may include phosphorus oxides. Isolate and restrict area access. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.
<b>Special protective equipment for fire-fighters</b>	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
<b>Special protective precautions for fire-fighters</b>	: No special protection is required.

## Section 6. Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate 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** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and clean up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Neutralize with lime slurry, limestone, or soda ash. Neutralize contamination area and flush with large quantities of water. Try to work upwind of spill. Absorb with an inert dry material and place in an appropriate waste disposal container. Do not touch or walk through spilled material. Isolate hazard area and restrict access.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

## Section 7. Handling and Storage

### Precautions for safe handling

**Advice on general hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking

<p><b>Protective measures</b></p>	<p>and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.</p> <p>: Put on appropriate personal protective equipment (see Section 8). Do not ingest. 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.</p>
<p><b>Conditions for safe storage and any incompatibilities</b></p>	<p>: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.</p>

## Section 8. Exposure Controls/Personal Protection

<p><b>Control parameters</b></p>	
<p><b>Occupational exposure limits</b></p>	<p>: Limits for air contaminants: 1 mg/m<sup>3</sup> of air (Time weighted average, of 8 hrs), according to OSHA's mandatory PELs in the Z-Tables.</p>
<p><b>Biological limit values</b></p>	<p>: None.</p>
<p><b>Appropriate engineering controls</b></p>	<p>: 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.</p>
<p><b>Environmental exposure controls</b></p>	<p>: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.</p>
<p><b>Individual protection measures</b></p>	
<p><b>Hygiene measures</b></p>	<p>: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.</p>

<b>Personal Protective Equipment (PPE)</b>	: 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.
<b>Eye/face protection</b>	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
<b>Skin protection</b>	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
<b>Respiratory protection</b>	: Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
<b>Thermal hazards</b>	: None.

## Section 9. Physical and Chemical Properties

<b>Appearance (physical state)</b>	: Clourless viscous liquid.
<b>Odor</b>	: Odourless
<b>Odor threshold</b>	: Oderless
<b>pH</b>	: <1
<b>Melting point/Freezing point</b>	: -17°C -21°C (1-70°F)
<b>Initial boiling point and boiling range</b>	: 135-158°C (275-316°F)
<b>Flash point</b>	: Not applicable
<b>Evaporation rate</b>	: Not available
<b>Flammability (solid, gas)</b>	: Not flammable
<b>Upper/lower flammability or explosive limits</b>	: Not applicable
<b>Vapor pressure</b>	: 5.65-216 mm Hg
<b>Vapor density</b>	: Not available
<b>Density</b>	: 1.58 g/mL

<b>Solubility (ies)</b>	: Miscible in cold water
<b>Partition coefficient: n-octanol/water</b>	: Not available
<b>Auto-ignition temperature</b>	: Not applicable
<b>Decomposition temperature</b>	: Not available
<b>Viscosity</b>	: Not available

## Section 10. Stability and Reactivity

<b>Reactivity</b>	: The product reacts with certain metals to form flammable hydrogen gas (in air).
<b>Chemical stability</b>	: Normally stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: Keep from freezing. Avoid contact with skin, eyes or ingestion.
<b>Incompatible materials</b>	: Reacts vigorously or violently with many organic and inorganic chemicals such as: acids, acrolein, acrylonitrile, chlorinated hydrocarbons (ie: 1,2 dichloroethylene, trichloroethylene), chlorine dioxide, maleic anhydride, nitroethane, nitroparaffins, 2-nitrophenol, nitropropane, phosphorus, potassium persulphate, and tetrahydrofuran (containing peroxides). Will react with aluminum, tin, zinc or sodium borohydride forming hydrogen gas. Mixing with water can cause spattering and release of large amounts of heat.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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	
<b>Skin corrosion/irritation</b>	: It causes severe skin burn.			
<b>Serious eye damage/ irritation</b>	: It causes severe eye damage.			
<b>Respiratory or skin sensitization</b>	: No data available.			
<b>Germ cell mutagenicity</b>	: No data available.			
<b>Carcinogenicity</b>	: No data available.			

<b>Reproductive toxicity</b>	: No data available.
<b>STOT-single exposure</b>	: No data available.
<b>STOT-repeated exposure</b>	: No data available.
<b>Aspiration hazard</b>	: No data available.
<b>The Likely routes of exposure, health effects and Symptoms related to the physical, chemical and toxicological characteristics</b>	
<b>Eye contact</b>	: Corrosive to eye tissue and may cause severe damage and blindness.
<b>Inhalation</b>	: Mists may cause irritation of upper respiratory tract. Coughing, shortness of breath, headaches and confusion may occur. Vapours may cause pulmonary edema.
<b>Skin contact</b>	: It causes sever skin irritation. Causes burns.
<b>Ingestion</b>	: It is harmful if ingested. Irritating to mouth, throat and stomach. There is no known health effect.
<b>Delayed and immediate effects and also chronic effects from short or long term exposure</b>	
<b>Short-term exposure</b>	
<b>Potential immediate effects</b>	: No data available.
<b>Potential delayed effects</b>	: No data available.
<b>Long-term exposure</b>	
<b>Potential immediate effects</b>	: No data available.
<b>Potential delayed effects</b>	: No data available.
<b>Potential Chronic health effect</b>	: No data available.
<b>Numerical measures of toxicity</b>	
<b>Acute toxicity estimate</b>	
<b>Oral</b>	: No data available.
<b>Inhalation of vapors</b>	: No data available.

## Section 12. Ecological Information


<b>Toxicity</b>				
<b>Ingredient name</b>	<b>Result</b>	<b>Species</b>	<b>Exposure</b>	<b>Reference</b>
Phosphoric acid	LC50 138mg/L	Mosquito Fish	96 hours	ClearTech
<b>Persistence and degradability</b>	: No data available.			
<b>Bio accumulative potential</b>	: No data available.			
<b>Mobility in soil</b>	: No data available.			
<b>Other adverse effects</b>	: No data available.			



## Section 13. Disposal Considerations

<b>Disposal of waste methods</b>	: Disposal of all waste must be done in accordance with municipal, provincial and federal regulations. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. No sewage disposal!!
<b>Contaminated packaging</b>	: Empty containers should be recycled or disposed of through an approved waste management facility. Persons conducting disposal, recycling or reclamation activities should follow the information in Section 8 of this SDS.

## Section 14. Transport Information

Identification of ingredients according to UN Model Regulations	
<b>UN number</b>	1805
<b>UN proper shipping name</b>	Phosphoric acid solution
<b>Transport hazard class(es)</b>	 8
<b>Packing group</b>	III
<b>Special precaution for user</b>	<b>Transport within user's premises:</b> 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.
<b>Transport in bulk</b>	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

<b>Safety, health and environmental regulations specific for the product in question</b>	: No known specific national and/or regional regulations applicable to this product (including its ingredients).
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## Section 16. Other Information

<b>Prepared by</b>	: Department of Product Development, Advanced Nutrients Ltd., Canada
<b>Date of preparation (d/m/y)</b>	: 31/01/2016
<b>Version</b>	: 6

<b>Date of Revision</b>	: 18/07/2024
<b>Revised Sections</b>	: Sections 9
<b>Key Acronyms:</b>	
<b>ADN</b>	: The European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways
<b>ADR</b>	: The European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>BW</b>	: Body Weight
<b>IATA</b>	: International Air Transport Association shipment of Dangerous Goods Regulation
<b>IMDG</b>	: International Maritime Dangerous Goods code
<b>RID</b>	: The Regulation concerning the International Carriage of Dangerous Goods by Rail
<b>SDS</b>	: Safety Data Sheet
<b>Key Literature References:</b>	
<b>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.</b> Intergovernmental Organization for International Carriage by Rail (OTIF). Berne, Switzerland, 2012.	
<b>European Chemical Agency (ECHA) 2015. Information on Chemicals: Registered substances</b> <a href="http://echa.europa.eu/information-on-chemicals/registered-substances">http://echa.europa.eu/information-on-chemicals/registered-substances</a> . Online Database. Accessed on March 16, 2015.	
<b>European Agreement concerning the International Transport of Dangerous Goods by Inland Waterways (ADN), including the Annexed Regulations, applicable as from 1 January 2013.</b> 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.	
<b>European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), applicable as from 1 January 2013.</b> 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.	
<b>Globally Harmonized System of Classification and Labelling of Chemicals.</b> 5 <sup>th</sup> Edition. ST/SG/AC. 10.30/Rev. 5. United Nations, New York and Geneva, 2013.	
<b>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).</b> European Chemical Agency, Finland, 2011.	
<b>International Maritime Dangerous Goods (IMDG) Code Volume 1 and 2. Incorporating Amendment 33-06, 2006 Edition.</b> International Maritime Organization. London, 2006.	
<b>OSH Answers Fact Sheets. Canadian Centre for Occupational Health and Safety.</b> <a href="http://www.ccohs.ca/oshanswers/chemicals/oxidizing/oxidizing_hazards.html">http://www.ccohs.ca/oshanswers/chemicals/oxidizing/oxidizing_hazards.html</a> Accessed on April 08, 2015.	
<b>OSHA Law and Regulations. Occupational Safety and Health Standards 29 CFR: 1910.</b> <a href="https://www.osha.gov/law-regs.html">https://www.osha.gov/law-regs.html</a> Accessed on April 15, 2015.	
<b>Recommendations on the Transport of Dangerous Goods – Manual of Test and Criteria.</b> 5 <sup>th</sup> Edition. ST/SG/AC. 10/11/Rev. 5. United Nations, New York and Geneva, 2009.	

**Recommendations on the Transport of Dangerous Goods – Model Regulations.** 18<sup>th</sup> 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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