Safety Data Sheet

Advanced Nutrients Sensi Grow Part "A" pH-Perfect Base Nutrient

Section 1. Identification

GHS product identifier	:	Advanced Nutrients Sensi Grow Part "A" pH-Perfect Base Nutrient
Other means of identification	:	Product Code: 6201 Formula Code: 001C
Recommended use of the chemical and restriction on use	:	A plant nutrient used to obtain faster growth and larger yields in all kinds of growing media. Not to be used as food or feed in any forms.
Supplier/Manufacturer's details	:	Advanced Nutrients Ltd. 109-31063 Wheel Ave. Abbotsford, BC Canada V2T6H1 Tel: (877) 604-8637 Email: info@advancednutrients.com www.advancednutrients.com
Emergency Phone number	:	24 Hour Transportation Emergency Number – CHEMTREC 1-800-424-9300 U.S.A, Canada, International

Section 2. Hazard Identification

GHS classification of the substance/mixture	:	Neither the mixture nor its major constituents are listed in (a) the CLP/GHS database (Table 3.1 and 3.2 of Annex VI to CLP) and (b) OSHA Laws & Regulations (29 CFR - 1910 Subpart Z: Table Z-1 to Z-3) as hazardous materials.
GHS label elements		
Pictogram symbol	:	Not applicable.
Signal word	:	Not applicable.
Hazard statement	:	Not hazardous.
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	:	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
Response	:	If skin or eye irritation occurs get medical advice/attention. If in eyes: rinse cautiously with water for several minutes.
Storage	:	Store in cool and dry place.
Disposal	:	Dispose of contents and container in accordance with local, regional, national and international regulations.

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Other hazards (not covered the GHS	:	Calcium nitrate and Magnesium nitrate are used in the manufacture of this product. The US National Fire Protection Association (NFPA) Code 430 (1995) has classified Magnesium nitrate as oxidizing material in Class 1, which do not cause spontaneous ignition when it comes in contact with combustible materials.

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 Law and Regulations
Calcium Nitrate	10124-37-5	10-20	Not classified as hazardous
Magnesium Nitrate	10377-60-3	10-20	Not classified as hazardous

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	:	Pay attention to self-protection. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
General information	:	Remove contaminated clothing immediately. In case of accident or unwellness, seek medical attention immediately.
Inhalation	:	Move victim to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if adverse health effects persist or are severe.
Skin contact	:	Wash contaminated skin with plenty of water and soap. Wash contaminated clothing and clean shoes before reuse. Get medical attention if adverse health effects persist or are severe.

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Eye contact	:	Immediately flush eyes with plenty of water with the eyelids open. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention if adverse health effects persist or are severe.
Ingestion	:	If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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	:	Not known health effect due to skin contact.
Eye contact	:	If in eyes, it causes eye irritation.
Ingestion	:	If swallowed, it irritates mouth, throat and stomach.

Indication of immediate medical attention and special treatment needed:

Notes to physician	:	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	:	No specific treatment.

See also toxicological information (Section 11).

Section 5. Fire-fighting Methods

Suitable extinguishing media	:	Any media suitable for extinguishing a surrounding fire.
Unsuitable extinguishing media	:	Not known.
Specific hazards arising from the chemical	:	In a fire, hazardous thermal decomposition products may be produced including nitrogen oxides and metal oxide/oxides.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.
Special protective precautions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Risk of explosion. If large quantities are involved in a major fire, evacuate the area. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if

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	this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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 specialised 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. Dilute with water and mop up if water-soluble. Do not absorb in sawdust or other combustible material. It may lead to a fire risk when it dries out. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose via a licensed waste disposal contractor.
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.

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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 and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
Protective measures	:	Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from heat. Empty containers retain product residue and can be hazardous. Do not reuse container.
Conditions for safe storage and any incompatibilities	:	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. Separate from reducing agents and combustible materials. 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.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits	:	Not applicable according to OSHA's mandatory PELs in the Z-Tables.
Biological limit values	:	None.
Appropriate engineering controls	:	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure controls	:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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Individual protection measures		
Hygiene measures	:	Wash hands, forearms and face thoroughly after handling chemical products, before breaks and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
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	:	Do not get in eyes. Wear chemical safety goggles and a face shield if splashing hazard exists.
Skin protection	:	Avoid skin contact. Wear gloves when handling the product directly.
Respiratory protection	:	Not normally required if the product is used as directed. Use a properly fitted, air-purifying or supplied air respirator complying with an approved standard if a risk assessment indicates this is necessary.
Thermal hazards	:	None.

Section 9. Physical and Chemical Properties

Appearance (physical state)	:	Liquid, Deep burgundy, opaque
Odor	:	Mineral
Odor threshold	:	Not available
pH	:	5.08 – 5.59
Melting point/Freezing point	:	Not available/-9.0°C
Initial boiling point and boiling range	:	100°C (212°F)
Flash point	:	Not available
Evaporation rate	:	Not available
Flammability (solid, gas)	:	Not available
Upper/lower flammability or explosive limits	:	Not available
Vapor pressure	:	Not available
Vapor density	:	Not available
Relative density	:	1.146 – 1.164 g/ml
Solubility (ies)	:	Complete in water
Partition coefficient: n-octanol/water	:	Not available

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Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
Viscosity	:	Not available

Section 10. Stability and Reactivity

Reactivity	:	Not available.
Chemical stability	:	Normally stable.
Possibility of hazardous reactions	:	No hazardous reactions or instability may occur when it contact with combustible materials.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	Reducing materials, organic materials, metals and acids.
Hazardous decomposition products	:	None under normal conditions of storage and use.

Section 11. Toxicological Information

Acute toxicity

Ingredient	Toxicity	Species	Dose*	Remark
Calcium nitrate	Oral LD50	Rat	300 - 2000 mg/kg bw	Harmful if swallowed
	Inhalation LC50	No data available	No data available	No data available
	Dermal LD50	No data available	No data available	No data available

*- Obtained from ECHA (Updated Feb. 25, 2015)

Skin corrosion/irritation	:	No data available.
Serious eye damage/ irritation	:	No data available.
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	:	If in eyes, it causes eye irritation. The symptoms may include irritation, watering and redness.
Inhalation	:	There is no known health effect.
Skin contact	:	There is no known health effect.
Ingestion	:	It is harmful if ingested. Irritating to mouth, throat and stomach. There is no known health effect.

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Delayed and immediate effects and also chronic effects from short or long term exposure

Short-term exposure

Potential immediate effects : Not known.

Potential delayed effects : Not known.

Long-term exposure

Potential immediate effects : Not known.

Potential delayed effects : Not known.

Potential Chronic health effect : Not known.

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
Calcium nitrate	Acute LC50 1378 mg/l Fresh water	Fish - Labeo boga	96 hours	IUCLID 5
	Acute LC50 490 mg/l Fresh water	Aquatic invertebrate - Daphnia	48 hours	IUCLID 5
	Acute EC50 > 1700 mg/l Salt water	Aquatic plants - Heterosigma akashiwo	10 days	IUCLID 5

* Practically non-toxic to aquatic organisms

Persistence and degradability : No data available.

Bioaccumulative potential : No data available.

Mobility in soil : No data available.

Other adverse effects : No known significant effect.

Section 13. Disposal Considerations

Disposal of waste methods : 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!!

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Contaminated packaging	:	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	
UN number	This product is a mixture of ingredients which are not listed as 'Dangerous Goods' in Chapter 3.2 of UN Recommendations on the Transport of Dangerous Goods and/or one or more ingredients are included in the list but their mixture is exempted from the same Regulation based on the Articles 2.0.2.5 (C), 2.0.2.7 and 3.3.1 No. 208.
UN proper shipping name	
Transport hazard class(es)	
Packing group	
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 (≤ 1000L-container).

Environmental hazards

Ingredient's name	IMDG	UN	ADR	RID	ADN
Calcium nitrate	No	No	No	No	No
Magnesium nitrate	No	No	No	No	No

Section 15. Regulatory Information

Safety, health and environmental regulations specific for the product in question	:	No known specific national and/or regional regulations applicable to this product (including its ingredients).

Section 16. Other Information

Prepared by	:	Department of Product Development, Advanced Nutrients Ltd., Canada
Date of preparation (d/m/y)	:	24/04/2015
Version	:	4
Date of Revision	:	16/04/2020
Revised Sections	:	Section 1
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

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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 Organisation 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/oxiziding_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

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may be duplicated or the data transcribed to an alternative form.

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