Safety Data Sheet

Advanced Nutrients: Cultivator Series Grow Water Soluble Powder

Section 1. Identification

GHS product identifier	:	Advanced Nutrients: Cultivator Series Grow Water Soluble Powder
Other means of identification	:	Product Code: 1320 Formula Code: 001A
Recommended use of the chemical and restriction on use	:	A plant nutrient used to obtain faster growth and larger yields. Not to be used as food or feed in any forms.
Supplier/Manufacturer's details	:	Advanced Nutrients 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 CCN: 613830 (North America, including Canada and Mexico) 1+703-527-3887CCN: 613830 (International)

Section 2. Hazard Identification

GHS classification of the substance/mixture	:	Serious Eye Damage; 1 Acute Toxicity, Oral; 4 Skin Irritation; 3
GHS label elements		
Pictogram symbol	:	
Signal word	:	Danger, Warning
Hazard statement	:	Causes serious eye damage. Harmful if swallowed. Causes mild skin irritation
Precautionary statement		
General	:	Read label before use. Keep out of reach of children.
Prevention	:	Wear eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

Response	:	If swallowed: call a Poison Center or doctor if you feel unwell. Rinse mouth. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs get medical advice.
Storage	:	Store in cool and dry place.
Disposal	:	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards (not covered by the GHS)	:	Product may form slippery surface when wet.

Section 3. Composition/Information on Ingredients

Substance/Mixture	:	Mixture of substances.
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
Magnesium Nitrate	13446-18-9	35 - 40%	
Potassium Nitrate	7757-79-1	20 - 25%	
Monopotassium Phosphate	7778-77-0	15 - 19%	
Potassium Sulfate	7778-80-5	15 – 17%	

Other Ingredients: There are no additional ingredients present in concentrations above the relevant cut-off values which in the best knowledge of the supplier would contribute to the hazards of this product.

**Exact concentrations of ingredients deemed to be trade secrets may be withheld in accordance with 29CFR §1910.1200 (i)*

Section 4. First-aid Measures

Description of necessary measures

Self-protection of first-aiders	:	No action shall be taken involving any personal risk or without suitable training.
General information	:	The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.
Inhalation	:	Remove exposed person to fresh air. Get medical attention if exposed person feels unwell.

Skin contact	:	Remove contaminated clothing. Rinse affected area with water for at least 15 minutes. Get medical attention if skin irritation develops or persists.
Eye contact	:	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately.
Ingestion	:	Rinse out mouth with water. If material has been swallowed and exposed person is conscious, give small amounts of water to drink. Do not induce vomiting unless advised to do so by medical personnel. Get medical attention if exposed person feels unwell.

Most important symptoms/effects, acute and delayed:

Inhalation	:	Inhaled dusts may cause respiratory tract irritation.
Skin contact	:	May cause skin irritation.
Eye contact	:	Causes eye irritation. Symptoms include pain, watering, and redness of the eyes.
Ingestion	:	Harmful if swallowed. May cause burns to mouth, throat, and stomach. May cause stomach pain.

Indication of immediate medical attention and special treatment needed:

Notes to physician	:	Treat symptomatically.
Specific treatments	:	If exposed or concerned, seek medical attention.

Section 5. Fire-fighting Methods

Suitable extinguishing media	:	Flooding quantities of water.
Unsuitable extinguishing media	:	Dry chemical, carbon dioxide, or foam.
Specific hazards arising from the chemical	:	Thermal decomposition products include oxides of nitrogen, oxides of carbon, and ammonia. Toxic or corrosive gasses may be produced in a fire.
Special protective equipment for fire-fighters	:	Full turn-out gear with self-contained breathing apparatus (SCBA).
Special protective precautions for fire-fighters	:	Remain upwind of the fire. Avoid breathing dusts or fumes from burning material. Do not attempt to smother the fire with steam or sand. Water spray onto molten material may cause spattering.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	Protective Equipment: Chemical resistant gloves, eye protection, and respiratory protection (if dusty). Emergency Procedures: Evacuate unnecessary personnel. Avoid walking through spilled material. Ventilate area, as necessary.
For emergency personnel	:	Protective Equipment: Chemical resistant gloves, eye protection, and respiratory protection (if dusty). Emergency Procedures: Evacuate unnecessary personnel. Avoid walking through spilled material. Ventilate area as necessary
Environmental precautions	:	Care should be taken to prevent material from entering waterways, sewers, or drains.

Methods and materials for containment and clean up

Small and large spill	:	Clean up spills immediately. Contain any spills with dikes to prevent from reaching drains or waterways. Scoop or shovel spilled material into an appropriate container. Avoid sweeping in dry conditions to present dust generation. Dispose of contents and container in accordance with local, regional, national, and international regulations. Spilled uncontaminated dry material and solutions may be applied to plants or land as a fertilizer according to package directions.

Section 7. Handling and Storage

Precautions for safe handling

Advice on general hygiene	:	Handle in accordance with good industrial hygiene practices. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Spilled product creates a slippery surface when wet.
Protective measures	:	Wear eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear respiratory protection if dust is generated.
Conditions for safe storage and any incompatibilities	:	Store in a cool, dry, and well-ventilated place. Keep container tightly closed when not in use. Keep away from combustible and incompatible materials. Combustible materials, reducing materials, organic materials, strong acids, strong bases, halogens, chlorine, chlorinated compounds, and hydrogen peroxides.

Section 8. Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits :

Component	OSHA - PEL	ACGIH - TLV
Magnesium Nitrate	Not Established	Not Established
Potassium Nitrate	Not Established	Not Established
Monopotassium Phosphate	Not Established	Not Established
Potassium Sulfate	Not Established	Not Established

Biological limit values : None.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor, or mist, provide appropriate ventilation controls to minimize worker exposure.

Environmental exposure controls : Not available

Individual protection measures

Hygiene measures : Not available

Personal Protective Equipment (PPE)

Eye/face protection : Chemical goggles should be worn at all times during handling. An eye-wash station is recommended near where this product is handled.

Skin protection : Chemical-resistant gloves, and protective clothing should be worn at all times during handling.

Respiratory protection : Respiratory protection appropriate to the hazard and task performed should be worn if dust, fumes, gas, vapor, or mist is generated or if adequate ventilation is not available.

Thermal hazards : None.

Section 9. Physical and Chemical Properties

Appearance (physical state) : Light pink with black flakes powder

Odor : Mild to Moderate Oder

Odor threshold : Not available

pH : 4.0 – 6.0 (5% aqueous solution)

Melting point/Freezing point : Not applicable*

Initial boiling point and boiling range : Not applicable

Flash point : Not applicable

Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not applicable
Upper/lower flammability or explosive limits	:	Not applicable
Vapor pressure	:	Not applicable
Vapor density	:	Not applicable
Relative density	:	1009 Kg/m^3 (63 lb/ft^3)
Solubility (ies)	:	Soluble in water
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not applicable
Viscosity	:	Not applicable

*Not relevant due to the nature of the product, not providing information property of its hazards.

Section 10. Stability and Reactivity

Reactivity	:	No hazardous reaction when handled and stored appropriately.
Chemical stability	:	Stable under normal storage and temperature conditions. Decomposes upon heating.
Possibility of hazardous reactions	:	Hazardous polymerization will not occur.
Conditions to avoid	:	Extreme temperatures, open flame, combustible, and incompatible materials.
Incompatible materials	:	Combustible materials, reducing materials, organic materials, strong acids, strong bases, halogens, chlorine, chlorinated compounds, and hydrogen peroxides.
Hazardous decomposition products	:	Thermal decomposition products include oxides of nitrogen, oxides of carbon, and ammonia.

Section 11. Toxicological Information

Acute toxicity

Ingredient	Toxicity	Species	Dose*
Magnesium Nitrate	Oral LD50	Rat	5440 mg/kg
	Inhalation LC50	-	-
	Dermal LD50	-	-
Potassium Nitrate	Oral LD50	-	>2000 mg/kg
	Inhalation LC50	-	>0.527 mg/L (4 h) *
	Dermal LD50	-	>5000 mg/kg

Monopotassium Phosphate	Oral LD50	Rat	7,100 mg/kg
	Inhalation LC50	-	-
	Dermal LD50	Rabbit	>7940 mg/kg

*Maximum achievable concentration.

Skin corrosion/irritation : There is no data available.

Serious eye damage/ irritation : There is no data available.

Respiratory or skin sensitization : There is no data available.

Germ cell mutagenicity : There is no data available.

Carcinogenicity :

Component	NTP	IARC	OSHA
Magnesium Nitrate	No	No	No
Potassium Nitrate	No	No	No
Monopotassium Phosphate	No	No	No
Potassium Sulfate	No	No	No

Reproductive toxicity : There is no data available.

STOT-single exposure : There is no data available.

STOT-repeated exposure : There is no data available.

Aspiration hazard : There is no data available.

The Likely routes of exposure, health effects and Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Causes serious eye damage.

Inhalation : Inhaled dusts may cause respiratory tract irritation.

Skin contact : May cause skin irritation.

Ingestion : Harmful if swallowed.

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

Short-term exposure

Potential immediate effects : No delayed or chronic effects from short- or long-term exposures are known.

Potential delayed effects : No delayed or chronic effects from short- or long-term exposures are known.

Long-term exposure

Potential immediate effects : No delayed or chronic effects from short- or long-term exposures are known.

Potential delayed effects : No delayed or chronic effects from short- or long-term exposures are known.

Potential Chronic health effect : No delayed or chronic effects from short- or long-term exposures are known.

Numerical measures of toxicity

Acute toxicity estimate

Oral : There is no data available.

Inhalation of vapors : There is no data available.

Section 12. Ecological Information

Toxicity				
Ingredient name		**Acute Toxicity**	**Species**	**Exposure**
Potassium Nitrate	LC50	1378 mg/L	Freshwater Fish	96 hours
	EC50	490 mg/L	Freshwater Flea	48 hours
	EC50	>1700 mg/L	Several algae species	10 days
Magnesium Nitrate	LC50	Not Classified		
	EC50			
	EC50			
Monopotassium Phosphate	LC50	Not Classified		
	EC50			
	EC50			
Potassium sulfate	LC50	Not Classified		
	EC50			
	EC50			

Persistence and degradability	:	Biodegradable (Potassium Nitrate).
Bio accumulative potential	:	No data available
Mobility in soil	:	Water soluble.
Other adverse effects	:	Large quantities of fertilizer released into the environment may kill vegetation and fish and cause algae blooms if bodies of water are contaminated.

Section 13. Disposal Considerations

Disposal of waste methods	:	Dispose of contents and container in accordance with local, regional, national, and international regulations. Spilled uncontaminated dry material and solutions may be applied to plants or land as a fertilizer according to package directions. Care should be taken to prevent material from entering waterways, sewers, or drains.
Contaminated packaging	:	Empty containers should be recycled or disposed of through an approved waste management facility.

Section 14. Transport Information

Identification of ingredients according to UN Model Regulations	
UN number	This product is not considered hazardous for purposes of transportation.
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

Environmental hazards

Ingredient's name	IMDG	UN	ADR	RID	ADN
Magnesium Nitrate	No	No	No	No	No
Potassium Nitrate					
Monopotassium Phosphate					
Potassium Sulfate					

Section 15. Regulatory Information

Safety, health and environmental regulations specific for the product in question : US Federal Regulations: Some components of this mixture may be subject to various regulations and reporting requirements. The regulatory status of components listed below does not affect the hazard classification of this mixture listed in Sec. 2 of this SDS.

	TSCA Inventory	SARA 302/304	SARA 311/312
Magnesium Nitrate	Listed	Not Listed	Not Listed
Potassium Nitrate	Listed	Not Listed	Fire Hazard
Monopotassium Phosphate	Listed	Not Listed	Not Listed
Potassium Sulfate	Not Listed	Not Listed	Not Listed

Section 16. Other Information

Prepared by : Research and Development Department, Advanced Nutrient U.S. LLC
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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
- **BCF** : Bioconcentration factor
- **BW** : Body Weight
- **BOD5** : 5-day biochemical oxygen demand
- **COD** : Chemical Oxygen Demand
- **EC50** : Effective concentration 50

IATA	:	International Air Transport Association shipment of Dangerous Goods Regulation
IARC	:	International Agency for Research on Cancer
IMDG	:	International Maritime Dangerous Goods code
LD50	:	Lethal Dose 50
LD50	:	Lethal Concentration 50
Log-POW	:	Octanol-water partition coefficient
NTP	:	National Toxicology Program
OSHA	:	Occupational Safety and Health Administration
RID	:	The Regulation concerning the International Carriage of Dangerous Goods by Rail
SARA	:	Superfund Amendments and Reauthorization Act
SDS	:	Safety Data Sheet
TDLo	:	Toxic Dose Low
TSCA	:	Toxic Substance Control Act

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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.

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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.