

NFPA Classification	DOT / TDG Pictograms	WHMIS Classification	HMIS		PROTECTIVE CLOTHING
			Health	1	
			Flammability	0	
			Reactivity	0	
			PPE	A	

Section I. Chemical Product and Company Identification

PRODUCT NAME/ TRADE NAME Ammonium Phosphate Sulfate Blends

SYNONYM This MSDS is applicable to all Agrium Dry Blended Fertilizers containing Ammonium Phosphate (MAP or DAP) and Ammonium Sulfate, including, but not limited to:

17-20-0-15S

MSDS NUMBER: 14006

CHEMICAL NAME Not applicable. A blended product.

REVISION NUMBER 4.11

CHEMICAL FAMILY Ammonium salt.

MSDS prepared by November 25, 2009
the Environment,
Health and Safety
Department on:

CHEMICAL FORMULA $NH_4H_2PO_4 - (NH_4)_2SO_4$

MATERIAL USES Agricultural industry: Fertilizer.

24 HR EMERGENCY TELEPHONE NUMBER:

Transportation: 1-800-792-8311
Medical: 1-888-670-8123

MANUFACTURER

Agrium
North American Wholesale
13131 Lake Fraser Drive, S.E.
Calgary, Alberta, Canada, T2J 7E8

Agrium U.S. Inc.
Suite 1700, 4582 South Ulster St.
Denver, Colorado, U.S.A., 80237

SUPPLIER

Agrium
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13131 Lake Fraser Drive, S.E.
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Suite 1700, 4582 South Ulster St.
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Section II. Hazardous Ingredients

NAME	CAS #	Exposure Limits (ACGIH)						% by Weight
		TLV-TWA mg/m ³	TLV-TWA ppm	STEL mg/m ³	STEL ppm	CEIL mg/m ³	CEIL ppm	
Monoammonium phosphate	7722-76-1	----						0-60
Diammonium phosphate	7783-28-0	---						0-60
Ammonium sulphate	7783-20-2	----						40-70

ACGIH TLV notations:

---- No assigned TLV

(C) - Ceiling - the concentration not to be exceeded at any time

(I) - measured as the Inhalable fraction of the aerosol

(R) - measured as the Respirable fraction of the aerosol

(T) - measured as the Thoracic fraction of the aerosol

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SEVERE INHALATION	Over-exposure by inhalation may cause respiratory irritation. In emergency situations use proper respiratory protection to evacuate the victim to a safe area as soon as possible. Loosen tight clothing around the victim's neck and waist. Allow the victim to rest in a well ventilated area. Oxygen may be administered if breathing is difficult. If the victim is not breathing, perform artificial respiration. Obtain immediate medical attention.
SLIGHT INGESTION	Do not induce vomiting. Low toxicity. May cause digestive tract irritation, with accompanying nausea, vomiting and diarrhea. If spontaneous vomiting does occur, lower the head so that the vomit will not reenter the mouth and throat. If tolerated, give no more than 1 cup of milk or water for adults or 1/2 cup for children to rinse the mouth and throat, dilute the stomach contents, and minimize irritation. Obtain medical attention if irritation persists.
EXTENSIVE INGESTION	No additional information.

Section V. Fire and Explosion Data

THE PRODUCT IS	Non-flammable.
AUTO-IGNITION TEMPERATURE	Not applicable.
FLASH POINT	Not applicable.
FLAMMABILITY LIMITS	Not applicable.
PRODUCTS OF COMBUSTION	Material will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and combustible gases: ammonia, nitrogen oxides, sulfur oxides, phosphorous oxides.
FIRE HAZARD IN THE PRESENCE OF VARIOUS SUBSTANCES	Not applicable.
EXPLOSION HAZARD IN THE PRESENCE OF VARIOUS SUBSTANCES	This product is non-explosive.
FIRE FIGHTING MEDIA AND INSTRUCTIONS	Material will not burn. Undergoes thermal decomposition at elevated temperatures to release toxic and combustible gases. Use extinguishing media suitable for surrounding materials.
SPECIAL REMARKS ON FIRE HAZARDS	Non combustible. Flammable/toxic gases will form at elevated temperatures (>190 °C) by thermal decomposition (ammonia, sulfur oxides, nitrogen oxides, phosphorus oxides). A self contained breathing apparatus should be used to avoid inhalation of toxic fumes.
SPECIAL REMARKS ON EXPLOSION HAZARDS	No additional remark.

Section VI. Accidental Release Measures

SMALL SPILL	Use appropriate tools to put spilled solid in a suitable container for intended use or disposal.
LARGE SPILL	Prevent additional discharge of material, if possible to do so without hazard. Prevent spills from entering sewers, watercourses, wells, etc. Product will promote algae growth which may degrade water quality and taste. Notify downstream water users. Sulfate in potable drinking water should be maintained below 250mg/L. Will dissolve and disperse in water. Reclaiming material may not be viable. Recover if possible and place material in suitable containers for recycle, reuse, or disposal. Ensure disposal complies with government requirements and local regulations.

Section VII. Handling and Storage

PRECAUTIONS	Avoid contact with skin and eyes. After handling, always wash hands thoroughly with soap and water. Do not breathe dust. Keep away from food, drink and animal feed. Avoid contact with incompatible substances. Keep out of reach of children.
STORAGE	Store in a dry, cool and well ventilated area.

Section VIII. Exposure Controls/Personal Protection

ENGINEERING CONTROLS	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit.
PERSONAL PROTECTION	The selection of personal protective equipment varies, depending upon conditions of use. Where skin and eye contact may occur as a result of brief periodic exposures, wear long sleeved clothing, coveralls, leather gloves, and safety glasses with side shields.
PERSONAL PROTECTION IN CASE OF LARGE RELEASE	Wear a NIOSH approved dust respirator if engineering, work practise or other control measures are not adequate to prevent overexposure. Where skin and eye contact may occur as a result of prolonged or repeated exposures, wear long sleeved clothing, coveralls, leather gloves, and safety glasses with side shields.
EXPOSURE LIMITS	<p>Alberta TWA: 10 mg/m³ Inhalable, 3 mg/m³ Respirable, for Particulate Not Otherwise Regulated.</p> <p>Fed OSHA PEL: 15 mg/m³ Total dust, 5 mg/m³ Respirable fraction, for Particulates Not Otherwise Regulated.</p> <p>Federal, State or Provincial exposure limits may vary by jurisdiction. Consult local authorities for acceptable exposure limits in your area.</p>

Section IX. Physical and Chemical Properties

PHYSICAL STATE AND APPEARANCE	Solid crystalline granules.		
MOLECULAR WEIGHT	Not applicable.	COLOR	A white, grey, brown or green mixture.
pH (10% SOLN/WATER)	5.6	ODOR	Odorless.
BOILING POINT	Decomposes.	ODOR THRESHOLD	Not applicable
MELTING POINT	Not applicable	TASTE	Acrid. (Slight.)
CRITICAL TEMPERATURE	Not available.	VOLATILITY	Not applicable.
SPECIFIC GRAVITY g/cc	Not available	SOLUBILITY	Easily soluble in hot water. Soluble in cold water.
BULK DENSITY kg/m³ ; lbs/ft³	Variable depending on composition and settling.	DISPERSION PROPERTIES	See solubility in water.
VAPOR PRESSURE	Not applicable.	WATER/OIL DIST. COEFF.	Not available.
VAPOR DENSITY	Not applicable.		

Section X. Stability and Reactivity Data

STABILITY	The product is stable.
INSTABILITY TEMPERATURE	Not available.
CONDITIONS OF INSTABILITY	No additional remark.
INCOMPATIBILITY WITH VARIOUS SUBSTANCES	Slightly reactive with oxidizing agents. Very slightly to slightly reactive with metals, alkalis, moisture.

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CORROSIVITY	Corrosive to aluminum, zinc, and copper. Slightly corrosive to mild steel. Non-corrosive to stainless steel.
SPECIAL REMARKS ON REACTIVITY	Avoid contact with moisture. Slow hydrolysis will produce corrosive acids.
SPECIAL REMARKS ON CORROSIVITY	Incompatible with copper alloys. Corrosive to brass. Corrosive to ferrous metals and alloys. Corrosive to metals. Contact a metallurgical specialist to ensure compatibility with your equipment.

Section XI. Toxicological Information

SIGNIFICANT ROUTES OF EXPOSURE	Ingestion. Inhalation.
TOXICITY TO ANIMALS	See Section II.
SPECIAL REMARKS ON TOXICITY TO ANIMALS	Will release ammonium ions. Ammonia is a toxic hazard to fish. Avoid spills or release to watercourses. May be harmful to livestock and wildlife if ingested. Clean up all spilled material, especially where bulk fertilizer loading of equipment occurs.
OTHER EFFECTS ON HUMANS	Our data base contains no additional remark on the toxicity of this product
SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS	No additional remark.
SPECIAL REMARKS ON OTHER EFFECTS ON HUMANS	No additional remark.


Section XII. Ecological Information

ECOTOXICITY	Non-persistent. Non-cumulative when applied using normal agricultural practises. The product itself and its products of degradation are not harmful under normal conditions of careful and responsible use. Will release ammonium ions. Ammonia is a toxic hazard to fish. Avoid spills or release to watercourses.
BOD and COD	Not available.
PRODUCTS OF DEGRADATION	Nitrogen oxides (NO,NO ₂ ...), Sulfur oxides (SO ₂ , SO ₃ ...), phosphates Inorganic mineral salts and oxides.
TOXICITY OF THE PRODUCTS OF DEGRADATION	The products of biodegradation are not harmful under normal conditions of slow metabolic release.
SPECIAL REMARKS ON THE PRODUCTS OF DEGRADATION	Product will promote algae growth and may degrade water quality and taste. Notify downstream water users. Sulfate in potable drinking water should be maintained below 500mg/L (Canada), and 250 mg/L (U.S.). Will dissolve and disperse in water. Reclaiming material may not be viable.

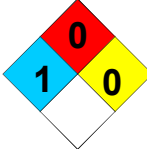



Section XIII. Disposal Considerations

WASTE DISPOSAL OR RECYCLING	Recycle to process, if possible. Ensure disposal is in compliance with government requirements and local regulations. Consult your local or regional authorities.
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Section XIV. Transport Information

DOT / TDG CLASSIFICATION	Not controlled under TDG (Canada) or DOT (U.S.).
PIN and Shipping Name	Not applicable.
SPECIAL PROVISIONS FOR TRANSPORT	No additional remark.
DOT (U.S.A) (Pictograms)	

Section XV. Other Regulatory Information and Pictograms

OTHER REGULATIONS	<p>CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): This product is on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA. TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory. CERCLA/SUPERFUND, 40 CFR 117,302: This product contains no Reportable Quantity (RQ) Substances. This product is not considered as a priority pollutant as regulated under the Clean Water Act. This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372: Aqueous ammonia from water dissociable ammonium ions, 10% of which is reportable under this listing, as CAS#7783-20-2 and as CAS#7722-76-1. Refer to the specific product analysis for your product to determine your reporting requirements under this regulation. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and is not subject to control under WHMIS (Canada), or the Hazcom Standard (US).</p>		
OTHER CLASSIFICATIONS	HCS (U.S.A.)	Not controlled under the HCS (United States).	
	DSCL (EEC)	Not controlled under DSCL (Europe).	
National Fire Protection Association (U.S.A.)	Hazards presented under acute emergency conditions only:		<p>Fire Hazard Reactivity</p> <p>Specific Hazard</p>
TDG (Pictograms - Canada)			
DSCL (Europe) (Pictograms)			
ADR (Europe) (Pictograms)			

Section XVI. Other Information**REFERENCES**

- Transportation of Dangerous Goods Act and Clear Language Regulations, current revision.
- Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Domestic Substances List, Canadian Environmental Protection Act.
- 29 CFR Part 1910
- 33 CFR Parts 151, 153, 154, 156
- 40 CFR Parts 1-799
- 46 CFR Part 153
- 49 CFR Parts 1-199
- American Conference of Governmental Industrial Hygienists, Threshold Limit Values for Chemical Substances, 2009.
- NFPA 704, National Fire Codes Online, National Fire Protection Association, current edition at time of MSDS preparation.
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers
- ERG2008 Emergency Response Guidebook
- CHRIS Hazardous Chemical Data: U.S. Coast Guard, Washington, D.C.
- HSDB: Hazardous Substances Data Bank. National Library of Medicine, Bethesda, Maryland
- IRIS: Integrated Risk Information System. U.S. Environmental Protection Agency, Washington, D.C.
- NIOSH: Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health, Cincinnati, Ohio
- OHM/TADS: Oil and Hazardous Materials Technical Assistance Data System U.S. Environmental Protection Agency, Washington, D.C.
- RTECS®: Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio
- The Fertilizer Institute Product Testing Program Results, March 2003
- Alberta Workplace Health and Safety, Occupational Health and Safety Code

OTHER SPECIAL CONSIDERATIONS

Three year review. References updated in this revision.

FOR FURTHER SAFETY, HEALTH, OR ENVIRONMENTAL INFORMATION ON THIS PRODUCT, CONTACT

AGRIUM
Wholesale Environment, Health and Safety
Telephone (780) 998-6906 or Fax (780) 998-6677

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