

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 Potash Blends

**SYNONYM** This MSDS is applicable to all Agrium Dry Blended Fertilizers containing Ammonium Phosphate (MAP or DAP) and Potash.

**MSDS NUMBER:** 14007

**CHEMICAL NAME** Not applicable.

**REVISION NUMBER** 4.3

**CHEMICAL FAMILY** Ammonium salt.

**MSDS prepared by** September 21, 2006  
the Environment,  
Health and Safety  
Department on:

**CHEMICAL FORMULA** Not applicable.

**24 HR EMERGENCY TELEPHONE NUMBER:**

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

**MATERIAL USES** Agricultural use.: Fertilizer.  
Industrial applications: Manufacture of specialty fertilizers.

**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  
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

## Section II. Hazardous Ingredients

NAME	CAS #	Exposure Limits (ACGIH)						% by Weight
		TLV-TWA mg/m <sup>3</sup>	TLV-TWA ppm	STEL mg/m <sup>3</sup>	STEL ppm	CEIL mg/m <sup>3</sup>	CEIL ppm	
Monoammonium phosphate	7722-76-1	---						0-75
Diammonium phosphate	7783-28-0	---						0-75
Potassium chloride	7447-40-7	10						0-25

**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

**TOXICOLOGICAL DATA ON INGREDIENTS**

**Monoammonium Phosphate TFI Product Testing Program:**

Acute oral LD<sub>50</sub>, rat, OECD 425 protocol: >2,000 mg/kg. MAP is not acutely toxic by the oral route of exposure.

Acute dermal LD<sub>50</sub>, rat, OECD 402 protocol: >5,000 mg/kg. MAP is not acutely toxic by the dermal route of exposure.

**Ecotoxicity:**

Acute fish toxicity, 96hr LC<sub>50</sub>, rainbow trout, OECD 203 protocol: >85.9 mg/L. The acute toxicity of MAP to fish is low.

*Continued on Next Page*

**Ammonium phosphate dibasic**

TFI Product Testing Results, OECD 402 acute dermal toxicity: LD<sub>50</sub>: > 5,000 mg/kg rat, not acutely toxic

TFI Product Testing Results, OECD 425 acute oral toxicity: LD<sub>50</sub>: > 2,000 mg/kg rat, not acutely toxic

TFI Product Testing Results, OECD 201 green algae acute toxicity testing, no toxicity observed at up to 97.1 mg/L (highest conc tested); growth stimulated at 6.4 mg/L and higher.

**Ecotoxicity:**

Acute fish toxicity, 96hr LC<sub>50</sub>, rainbow trout, OECD 203 protocol: >85.9 mg/L. The acute toxicity of MAP to fish is low.

**Potash TFI Product Testing Program Results:**

Acute oral toxicity: 2,600 mg/kg rat; 1,500 mg/kg mouse

**Ecotoxicity:**

Acute toxicity to fish, species unspecified, LC<sub>50</sub>, 96hr: 2,010 mg/L

Acute toxicity to aquatic invertebrates, Daphnia magna, 48hr TLm 337mg/L

Toxicity to aquatic plants (algae) Chlorella vulgaris, NOEC=600 mg/L, 3-4 months

This product and its components are not considered hazardous according to WHMIS (Canada) or HAZCOM (United States) standards.

**Section III. Hazards Identification.**

**POTENTIAL ACUTE HEALTH EFFECTS**

This product may irritate eyes and skin upon prolonged or repeated contact due to salt effects or mechanical action. Over-exposure by inhalation may cause respiratory tract irritation. Ingestion of this substance may produce irritation of the gastro-intestinal tract, characterized by burning and diarrhea.

**POTENTIAL CHRONIC HEALTH EFFECTS**

**CARCINOGENIC EFFECTS:** NONE by ACGIH, EPA, IARC, NTP, OSHA.  
**MUTAGENIC EFFECTS:** NONE by ACGIH, EPA, IARC, NTP, OSHA.  
**TERATOGENIC EFFECTS:** NONE by ACGIH, EPA, IARC, NTP, OSHA.  
 There is no known effect from chronic exposure to this product.

**Section IV. First Aid Measures**

**EYE CONTACT**

May cause eye irritation by mechanical abrasion. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Obtain medical attention if irritation persists.

**MINOR SKIN CONTACT**

May cause skin irritation. Wash contaminated skin with soap and water. Cover dry or irritated skin with a good quality skin lotion. If irritation persists, seek medical attention.

**EXTENSIVE SKIN CONTACT**

No additional information.

**MINOR INHALATION**

Repeated or prolonged inhalation of dust may lead to respiratory irritation. Loosen tight clothing around the individual's neck and waist. Allow the person to rest in a well ventilated area. Obtain medical attention if irritation persists.

**SEVERE INHALATION**

In emergency situations use proper respiratory protection to evacuate affected individuals to a safe area as soon as possible. Loosen tight clothing around the person's neck and waist. Oxygen may be administered if breathing is difficult. If the person is not breathing, perform artificial respiration. Obtain immediate medical attention.

**SLIGHT INGESTION**

Do not induce vomiting. 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, and phosphorus 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	Non combustible. Material will not burn. Melts at temperatures above 190 °C. Under prolonged high temperature conditions, the product may undergo thermal decomposition to release toxic and combustible gases. Use extinguishing media suitable for surrounding materials.
SPECIAL REMARKS ON FIRE HAZARDS	Non combustible. Flammable and toxic gases may form at upon prolonged exposure to elevated temperatures (>190 °C) by thermal decomposition (ammonia, phosphorus oxides, nitrogen 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 the 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 and may degrade water quality and taste. Notify downstream water users. Recover and place material in suitable containers for recycle, reuse, or disposal. Ensure disposal is in compliance with government requirements and local regulations.

**Section VII. Handling and Storage**

PRECAUTIONS	After handling, always wash hands thoroughly with soap and water. Avoid contact with skin and eyes. 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. Wear appropriate respiratory protection for dust/mist when ventilation is inadequate. A filtering facepiece dust mask is recommended for most applications if respiratory protection is needed. Where skin and eye contact may occur as a result of brief periodic exposures, wear long sleeved clothing, coveralls, chemical resistant gloves, and safety glasses with side shields.
PERSONAL PROTECTION IN CASE OF LARGE RELEASE	No additional information.

**Continued on Next Page**

**EXPOSURE LIMITS**

U.S. OSHA: 15 mg/m<sup>3</sup> as Particulates Not Otherwise Regulated (nuisance dust).  
 Alberta WH&S: 10 mg/m<sup>3</sup> as Particulate not Otherwise Regulated  
 Saskatchewan Labour OH&S: 10 mg/m<sup>3</sup> as Particulate not Otherwise Regulated

Federal, State, and Provincial exposure limits may vary. Consult local authorities for acceptable exposure limits in your jurisdiction.

**Section IX. Physical and Chemical Properties**

<b>PHYSICAL STATE AND APPEARANCE</b>	A brown and red granular solid mixture.		
<b>MOLECULAR WEIGHT</b>	132.14	<b>COLOR</b>	Brown/Red.
<b>pH (10% SOLN/WATER)</b>	5	<b>ODOR</b>	Odorless.
<b>BOILING POINT</b>	Decomposes.	<b>ODOR THRESHOLD</b>	Not applicable
<b>MELTING POINT</b>	Not applicable,	<b>TASTE</b>	Acid. Saline.
<b>CRITICAL TEMPERATURE</b>	Not available.	<b>VOLATILITY</b>	Not applicable.
<b>SPECIFIC GRAVITY g/cc</b>	Not available.	<b>SOLUBILITY</b>	Easily soluble in hot water. Slightly soluble in cold water.
<b>BULK DENSITY kg/m<sup>3</sup> ; lbs/ft<sup>3</sup></b>	Variable depending on formulation and settling.	<b>DISPERSION PROPERTIES</b>	See solubility in water.
<b>VAPOR PRESSURE</b>	Not applicable.	<b>WATER/OIL DIST. COEFF.</b>	Not available.
<b>VAPOR DENSITY</b>	Not applicable.		

**Section X. Stability and Reactivity Data**

<b>STABILITY</b>	The product is stable.
<b>INSTABILITY TEMPERATURE</b>	Not available.
<b>CONDITIONS OF INSTABILITY</b>	No additional remark.
<b>INCOMPATABILITY WITH VARIOUS SUBSTANCES</b>	Very slightly reactive with oxidizing agents, reducing agents, metals, alkalis, moisture. Non-reactive with combustible materials, organic materials, acids.
<b>CORROSIVITY</b>	Corrosive to mild steel and aluminum. Slightly corrosive to zinc and copper. Non-corrosive to stainless steel (304 or 316).
<b>SPECIAL REMARKS ON REACTIVITY</b>	Avoid contact with moisture. Slow hydrolysis will produce corrosive acids.
<b>SPECIAL REMARKS ON CORROSIVITY</b>	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**

<b>SIGNIFICANT ROUTES OF EXPOSURE</b>	Ingestion. Inhalation.
<b>TOXICITY TO ANIMALS</b>	See Section II.
<b>SPECIAL REMARKS ON TOXICITY TO ANIMALS</b>	Very low toxicity for humans or animals. The product itself and its products of degradation are not toxic under normal conditions of use. Will release ammonium ions. Ammonia is a toxic hazard to fish. May be harmful to livestock and wildlife if ingested. Clean up all spilled material, especially where bulk fertilizer loading of equipment occurs to prevent animal exposure.
<b>OTHER EFFECTS ON HUMANS</b>	Our data base contains no additional remark on the toxicity of this product.

**Continued on Next Page**

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.
BOD and COD	Not available.
PRODUCTS OF DEGRADATION	Nitrogen oxides and phosphates.
TOXICITY OF THE PRODUCTS OF DEGRADATION	The product itself and its products of degradation are not harmful under normal conditions of use. Avoid spills or releases to watercourses.
SPECIAL REMARKS ON THE PRODUCTS OF DEGRADATION	Product will promote algae growth and may degrade water quality and taste. Notify downstream water users. Will slowly dissolve and disperse in water. Reclaiming material may not be viable.

### Section XIII. Disposal Considerations

WASTE DISPOSAL OR RECYCLING	Recover and place material in a suitable container for intended use or disposal. Recycle to process, if possible. Ensure disposal is in compliance with government requirements and local regulations. Consult your local or regional authorities.
-----------------------------	--

### Section XIV. Transport Information

DOT / TDG CLASSIFICATION	Not controlled under DOT (US) or TDG (Canada).
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.</p> <p>TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.</p> <p>CERCLA/SUPERFUND, 40 CFR 117,302: This product contains no Reportable Quantity (RQ) Substances.</p> <p>This product is not considered as a priority pollutant as regulated under the Clean Water Act.</p> <p>This product contains the following chemical subject to the reporting requirements of SARA Section 313 and 40 CFR 372:</p> <p>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.</p> <p>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).

Continued on Next Page

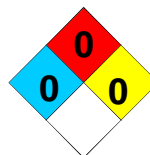
DSCL (EEC)

Not controlled under DSCL (Europe).

National Fire Protection Association (U.S.A.)

Hazards presented under acute emergency conditions only:

Health



Fire Hazard

Reactivity

Specific Hazard

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, 2006.
- 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
- TOMES® System: Heitland G & Hurlbut KM (Eds) (electronic version): MICROMEDEX, Greenwood Village, Colorado, USA. Available at: <http://csi.micromedex.com> (2006). The TOMES® System includes MEDITEXT® Medical Management; HAZARDTEXT® Hazard Management; INFOTEXT® Documents; ERG2000 Emergency Response Guidebook Documents; REPROTEXT®: Heitland G & Hurlbut KM (Eds); CHRIS Hazardous Chemical Data: U.S. Department of Transportation, U.S. Coast Guard, Washington, D.C. (2006); HSDB: Hazardous Substances Data Bank. National Library of Medicine, Bethesda, Maryland (2006); IRIS: Integrated Risk Information System. U.S. Environmental Protection Agency, Washington, D.C. (2006); NIOSH: Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health, Cincinnati, Ohio (2006); OHM/TADS: Oil and Hazardous Materials Technical Assistance Data System. U.S. Environmental Protection Agency, Washington, D.C. (2006); REPROTOX®: Scialli A.R. Georgetown University Medical Center and Reproductive Toxicology Center, Columbia Hospital for Women Medical Center, Washington, D.C. (2006); RTECS®: Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio (2006); and SHEPARDS: Shepard T.H.: Shepard's Catalog of Teratogenic Agents (2006).
- The Fertilizer Institute Product Testing Program Results, March 2003
- Alberta Workplace Health and Safety, Occupational Health and Safety Code
- Saskatchewan Labour, Occupational Health and Safety Division, Occupational Health and Safety Regulations

**OTHER SPECIAL CONSIDERATIONS**

HMIS information added in this revision.

**Continued on Next Page**

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

**NOTICE TO READER**

**The buyer assumes all risk in connection with the use of this material. The buyer assumes all responsibility for ensuring this material is used in a safe manner in compliance with applicable environmental, health and safety laws, policies and guidelines. Agrium Inc. assumes no responsibility or liability for the information supplied on this sheet, including any damages or injury caused thereby. Agrium Inc. does not warrant the fitness of this material for any particular use and assumes no responsibility for injury or damage caused directly or indirectly by or related to the use of the material. The information contained in this sheet is developed from what Agrium Inc. believes to be accurate and reliable sources, and is based on the opinions and facts available on the date of preparation.**