Agrium Material Safety Data Sheet

NFPA Classification	DOT / TDG Pictograms	WHMIS Classification	HMIS		PROTECTIVE CLOTHING
Health 0, Flammability 0, Reactivity 0, Specific Hazard			Health Flammability Reactivity PPE	0 0 0 a	

Section I. Chemical Product and Company Identification

PRODUCT NAME/ TRADE NAME	**Ammonium Polyphosphate Liquid, 10-34-0**

SYNONYM	Rainbow Liquid 10-34-0	**MSDS NUMBER:**	**12625**
CHEMICAL NAME	Not applicable. A blended product.	**REVISION NUMBER**	4.9
CHEMICAL FAMILY	Ammonium salt.	**MSDS prepared by the Environment, Health and Safety Department on:**	**January 19, 2007**
CHEMICAL FORMULA	Not applicable. A blended product.	**24 HR EMERGENCY TELEPHONE NUMBER:**	
MATERIAL USES	Agricultural industry: Fertilizer.	**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.
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SUPPLIER

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Section II. Hazardous Ingredients

		Exposure Limits (ACGIH)						
NAME	**CAS #**	**TLV-TWA mg/m³**	**TLV-TWA ppm**	**STEL mg/m³**	**STEL ppm**	**CEIL mg/m³**	**CEIL ppm**	**% by Weight**
No regulated components.								

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

Ammonium Polyphosphate Solution TFI Product Testing Program:
Acute oral LD_{50}, OECD 425 protocol: >2,000 mg/kg, rat
Acute dermal LD_{50}, OECD 402 protocol: >5,000 mg/kg, rat

Ecotoxicity:
Acute fish toxicity, 96hr LC_{50}, OECD 203 protocol, rainbow trout: >101 mg/L

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Section III. Hazards Identification.

POTENTIAL ACUTE HEALTH EFFECTS	This product may irritate eyes and skin upon prolonged or repeated contact. 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. 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. Wash contaminated clothing before reusing.
EXTENSIVE SKIN CONTACT	No additional information.
MINOR INHALATION	Repeated or prolonged inhalation of mists 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	No additional remark.
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, but thermal decomposition may result in flammable/toxic gases being formed after material evaporated to dryness. These products are nitrogen oxides and ammonia (NO, NO_2, NH_3).
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-flammable. Use extinguishing media suitable for surrounding materials.

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SPECIAL REMARKS ON FIRE HAZARDS	Non combustible. Flammable/toxic gases may form at elevated temperatures (>100 °C) by thermal decomposition (ammonia, phosphorus oxides, nitrogen oxides). Avoid temperatures above 100°C (212°F). On evaporation to dryness thermal decomposition may result.
SPECIAL REMARKS ON EXPLOSION HAZARDS	No additional remark.

Section VI. Accidental Release Measures

SMALL SPILL	Absorb with an inert material and place in an appropriate waste disposal container. Ensure disposal complies with local regulations.
LARGE SPILL	In the event of a spill, stop leak if possible to do so without risk. Dike and contain spilled material. Ensure that the spilled material does not enter sewers, wells, or watercourses. Product will promote algae growth which may degrade water quality and taste. Notify downstream water users. Pump up spilled material and place in suitable containers for reuse or disposal. Ensure disposal complies with local regulations.

Section VII. Handling and Storage

PRECAUTIONS	After handling, always wash hands thoroughly with soap and water. Avoid contact with skin and eyes. Keep away from food, drink and animal feed. Avoid contact with incompatable substances, particularly alkaline substances like caustic soda. Ensure previous containers and transport equipment containing strong alkali are thoroughly cleaned before adding 10-34-0 solution. Keep out of reach of children.
STORAGE	Keep in a cool, well-ventilated location.

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 mists, 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.
EXPOSURE LIMITS	Alberta TWA: 10 mg/m^3 Inhalable, 3 mg/m^3 Respirable, for Particulate Not Otherwise Regulated. Fed OSHA PEL: 15 mg/m^3 Total dust, 5 mg/m^3 Respirable fraction, for Particulates Not Otherwise Regulated. Federal, State or Provincial exposure limits may vary by jurisdiction. Consult local authorities for acceptable exposure limits in your area.

Section IX. Physical and Chemical Properties

PHYSICAL STATE AND APPEARANCE	Liquid. (Clear to slightly hazy liquid.)		
MOLECULAR WEIGHT	Not available.	**COLOR**	Clear green.
pH (10% SOLN/WATER)	7	**ODOR**	Odorless.
BOILING POINT	100 °C	**ODOR THRESHOLD**	17 PPM (Ammonia)
MELTING POINT	-18°C (-0.4°F)	**TASTE**	Acid. Saline.
CRITICAL TEMPERATURE	Not available.	**VOLATILITY**	Not available.

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SPECIFIC GRAVITY g/cc	1.4 (Water = 1)	**SOLUBILITY**	Easily soluble in cold water, hot water.
BULK DENSITY kg/m³ ; lbs/ft³	1400 kg/m^3; 87.4 lbs/ft^3; 11.7 lbs/gal (US).	**DISPERSION PROPERTIES**	Easily dispersed in any proportion in cold water and hot water.
VAPOR PRESSURE	Not available.	**WATER/OIL DIST. COEFF.**	Not available.
VAPOR DENSITY	Not available.		

Section X. Stability and Reactivity Data

STABILITY	The product is stable.
INSTABILITY TEMPERATURE	Not available.
CONDITIONS OF INSTABILITY	No additional remark.
INCOMPATABILITY WITH VARIOUS SUBSTANCES	Very slightly reactive with metals. Very reactive with strong alkaline substances like caustic soda, producing ammonia gas and heat with the possibility of the mixture boiling over and splashing.
CORROSIVITY	Slightly corrosive to copper, iron, and steel.
SPECIAL REMARKS ON REACTIVITY	No additional remark.
SPECIAL REMARKS ON CORROSIVITY	Incompatible with copper alloys. Corrosive to brass. Corrosive to ferrous metals and alloys. Contact your sales representative or a metallurgical specialist to ensure compatability with system 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. The product itself and its products of degradation are not harmful under normal conditions of use. 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 practices. May be harmful to fish, livestock, and wildlife. Dissolved mineral salts may cause irritation of the digestive tract. Aquatic/Marine Toxicity: Will release ammonium ions. Ammonia is a toxic hazard to fish. Will release phosphate. Phosphates will result in algae growth which may increase turbidity and deplete oxygen resulting in a hazard to fish or other marine organisms. Will disperse with the current. Release to watercourses may cause effects down stream from the point of release. Avoid spills or release to watercourses. U.S. D.O.T.: This material NOT listed as a Marine pollutant.

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BOD and COD	Not available.
PRODUCTS OF DEGRADATION	Nitrogen oxides (NO,NO_2...). 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 which may degrade water quality and taste. Notify downstream water users. Will disperse in water. Reclaiming material may not be viable.

Section XIII. Disposal Considerations

WASTE DISPOSAL OR RECYCLING	Pump up spilled material and place in suitable containers for reuse or disposal. Call for information on disposal alternatives. Ensure disposal complies with local regulations.

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	Not applicable.
DOT (U.S.A) (Pictograms)	

Section XV. Other Regulatory Information and Pictograms

OTHER REGULATIONS

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 material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

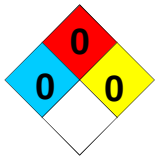
Aqueous ammonia from water dissociable ammonium ions: 14wt% (includes aqueous ammonia from water dissociable ammonium salts and other sources, 10% of which is reportable under this listing) as CAS# 68333-79-9. Refer to the specific product analysis for your product, and EPA Document 745-R-00-005 to determine your reporting requirements under this regulation.
This product is not considered as a priority pollutant as regulated under the Clean Water Act.
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).

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:



TDG (Pictograms - Canada)

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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 (2007). 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. (2007); HSDB: Hazardous Substances Data Bank. National Library of Medicine, Bethesda, Maryland (2007); IRIS: Integrated Risk Information System. U.S. Environmental Protection Agency, Washington, D.C. (2007); NIOSH: Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health, Cincinnati, Ohio (2007); OHM/TADS: Oil and Hazardous Materials Technical Assistance Data System. U.S. Environmental Protection Agency, Washington, D.C. (2007); REPROTOX®: Scialli A.R. Georgetown University Medical Center and Reproductive Toxicology Center, Columbia Hospital for Women Medical Center, Washington, D.C. (2007); RTECS®: Registry of Toxic Effects of Chemical Substances. National Institute for Occupational Safety and Health, Cincinnati, Ohio (2007); and SHEPARDS: Shepard T.H.: Shepard's Catalog of Teratogenic Agents (2007).
-The Fertilizer Institute Product Testing Program Results, March 2003

OTHER SPECIAL CONSIDERATIONS

HMIS information added in this revision.

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

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