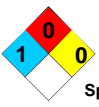





NFPA Classification	DOT / TDG Pictograms	WHMIS Classification	PROTECTIVE CLOTHING
Health  Flammability Reactivity Specific Hazard			

Section I. Chemical Product and Company Identification

PRODUCT NAME/ TRADE NAME		Kapusking Pit Run Phosphate Ore	
SYNONYM	Phosphate rock Kap Rock	MSDS NUMBER:	14235
CHEMICAL NAME	Fluoroapatite	REVISION NUMBER	4.1
CHEMICAL FAMILY	Mineral ore from the Kapuskasing area of Ontario, containing oxides of phosphorous, iron, aluminum, calcium, sodium, magnesium, silicon and small amounts of fluorides.	MSDS prepared by the Environment, Health and Safety Department on: September 12, 2001	
CHEMICAL FORMULA	Ca ₁₀ F ₂ (PO ₄) ₆	24 HR EMERGENCY TELEPHONE NUMBER: Transportation Emergency: 1 (800) 792-8311 Medical Emergency: 1 (888) 670-8123 Redwater site only: 6060 Kapuskasing site only: 222	
MATERIAL USES	Agricultural use: Raw material in the production of fertilizer.		
MANUFACTURER		SUPPLIER	
Agrium North American Wholesale 13131 Lake Fraser Drive, S.E. Calgary, Alberta, Canada T2J 7E8		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 ³	TLV-TWA ppm	STEL mg/m ³	STEL ppm	CEIL mg/m ³	CEIL ppm	
Fluoroapatite	1306-05-4	10						> 95
Silica, crystalline (quartz)	14808-60-7	0.1						1-3
Silica, crystalline (cristobalite)	7631-86-9	0.05						1-3
TOXICOLOGICAL DATA ON INGREDIENTS		Phosphate rock LD50: > 3g/kg						

Section III. Hazards Identification.

POTENTIAL ACUTE HEALTH EFFECTS	A dusty material if allowed to dry out due to the fine size of the particles. This product may irritate the eyes, nose, throat and skin upon prolonged or repeated contact due to mechanical action. Non-hazardous on ingestion. The material will pass through the digestive tract unchanged and with no effect.
POTENTIAL CHRONIC HEALTH EFFECTS	

Continued on Next Page

Contains minor quantities of quartz and cristobalite. Prolonged or repeated overexposures may cause progressive and permanent lung disorders, including silicosis. Quartz is classified as a suspected human carcinogen by the American Conference of Governmental Industrial Hygienists. Prolonged or repeated exposure to acid gases or mists from the digestion of phosphate rock may cause skeletal or dental disorder (fluorosis).

Section IV. First Aid Measures

EYE CONTACT	May cause eye irritation due to mechanical action. Rinse eyes with water to remove dust or grit.
MINOR SKIN CONTACT	No known toxic effect according to our database. May cause drying of the skin. Wash with soap and water. If dryness occurs, use a moisturizing lotion.
EXTENSIVE SKIN CONTACT	No additional information.
MINOR INHALATION	Inhalation of dust may produce irritation to the respiratory tract, characterized by sneezing and coughing. Allow the person to rest in a well ventilated area. If irritation persists, seek medical attention.
SEVERE INHALATION	No additional information.
SLIGHT INGESTION	The material is non-toxic on ingestion. The product will pass through the digestive tract unchanged and with no effect. No specific treatment is required.
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	Not applicable.
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.
SPECIAL REMARKS ON FIRE HAZARDS	No additional information.
SPECIAL REMARKS ON EXPLOSION HAZARDS	No additional information.

Section VI. Accidental Release Measures

SMALL SPILL	Use appropriate tools or equipment to place the spilled solid in a suitable container for use or disposal. Flush or wash the contaminated surface.
LARGE SPILL	No additional information.

Section VII. Handling and Storage

PRECAUTIONS	If user operations generate dust, use ventilation to keep exposure to airborne contaminants below the exposure limit. Watch for accumulation in low lying or confined areas.
STORAGE	A dusty material if allowed to dry out. Moisture content of material (8-13% is sufficient to reduce possibility for excessive dust levels. Protect from wind or airborne dust generation. Material displays complex handling characteristics with bridging, fluid flow, and hard set-up depending upon conditions of storage. Stockpiles of material may be unstable resulting in slumping, cliffing, and sand-like characteristics. Ensure stability of stockpiled materials.

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 adequate local exhaust or general ventilation to keep exposure to airborne contaminants below the exposure limits.
PERSONAL PROTECTION	The selection of personal protective equipment varies, depending upon conditions of use. Wear appropriate respiratory protection for dust 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. A respiratory protection program that meets OSHA 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.
PERSONAL PROTECTION IN CASE OF LARGE RELEASE	No further information.
EXPOSURE LIMITS	Occupational Exposure Limits are based on the content of crystalline silica in the produced rock. The ACGIH recommends the following Occupational Exposure Limits based on a 5% silica content: 8 hr TWA: 1.0 mg/m ³ as respirable dust. 12 hr TWA: 0.5 mg/m ³ as respirable dust. 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	Solid.		
MOLECULAR WEIGHT	502.32 g/mole as fluoroapatite	COLOR	May range from white to tan, sandy brown to grey, or grey to black.
pH (10% SOLN/WATER)	Not applicable.	ODOR	Earthy
BOILING POINT	Decomposes. (1100°C or 2012°F)	ODOR THRESHOLD	Not available.
MELTING POINT	Decomposes. (1100°C or 2012°F)	TASTE	Not available.
CRITICAL TEMPERATURE	Not applicable.	VOLATILITY	8-13% (w/w) as water.
SPECIFIC GRAVITY g/cc	Not available	SOLUBILITY	Insoluble in cold water, hot water.
BULK DENSITY kg/m³ ; lbs/ft³	Not available.	DISPERSION PROPERTIES	Is not dispersed in cold water, hot water.

Continued on Next Page

VAPOR PRESSURE	0 mm of Hg (@ 20°C)	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 information.
INCOMPATABILITY WITH VARIOUS SUBSTANCES	The product is stable.
CORROSIVITY	Low hazard for usual industrial or commercial handling.
SPECIAL REMARKS ON REACTIVITY	No additional information.
SPECIAL REMARKS ON CORROSIVITY	Non-corrosive.

Section XI. Toxicological Information

SIGNIFICANT ROUTES OF EXPOSURE	Inhalation.
TOXICITY TO ANIMALS	LD50: > 3 g/kg.
SPECIAL REMARKS ON TOXICITY TO ANIMALS	Low toxicity for humans or animals under normal conditions of use.
OTHER EFFECTS ON HUMANS	No additional information.
SPECIAL REMARKS ON CHRONIC EFFECTS ON HUMANS	No additional information.
SPECIAL REMARKS ON OTHER EFFECTS ON HUMANS	No additional information.

Section XII. Ecological Information

ECOTOXICITY	Not considered to be toxic to animals.
BOD and COD	Not available.
PRODUCTS OF DEGRADATION	Resistant to degradation in the natural environment.
TOXICITY OF THE PRODUCTS OF DEGRADATION	No additional remarks.
SPECIAL REMARKS ON THE PRODUCTS OF DEGRADATION	No additional information.

Section XIII. Disposal Considerations

WASTE DISPOSAL OR RECYCLING Recover and place material in a suitable container for intended use or disposal. Consult your environmental advisor for information on disposal alternatives.

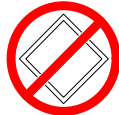
Section XIV. Transport Information

DOT / TDG CLASSIFICATION Not controlled under DoT (U.S.) or TDG (Canada).

PIN Not applicable (PIN and PG).

SPECIAL PROVISIONS FOR TRANSPORT Not regulated under TDG

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 is acceptable for use under the provisions of CEPA.
 OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
 TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

OTHER CLASSIFICATIONS

HCS (U.S.A.) HCS CLASS: May be toxic for the lungs.
DSCL (EEC) Not available.

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)

Not Available
 No Disponible
 Pas Disponible

ADR (Europe) (Pictograms)

Not Available
 No Disponible
 Pas Disponible

Section XVI. Other Information

REFERENCES

- TOMES Plus®, Vol 43, Jan 2000, Micromedex Inc.
- American Conference of Governmental Industrial Hygienists, TLVs™ and other Occupational Exposure Values, 2000.
- Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion Engineers.
- The Transportation of Dangerous Goods Act (1992) and Regulations, Transport Canada.
- Fire Protection Guide to Hazardous Materials, (NFPA49, 325M, 491M, and 704), National Fire Protection Association, 10th Ed, 1991.
- 29 CFR Part 1910
- 40 CFR Parts 1-799
- 49 CFR Parts 1-199

OTHER SPECIAL CONSIDERATIONS No additional information.

FOR FURTHER SAFETY, HEALTH, OR ENVIRONMENTAL INFORMATION ON THIS PRODUCT, CONTACT **AGRIUM**
 Environment, Health and Safety Department
 Telephone (780) 998-6134 or Fax (780) 998-6143

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