

Magruder 251141

Phosphate Rock

Results due December 15, 2025

Suggested analytes to analyze for:

*Total P (%), Available P (%), Ca (%), Mg (%), As (ppm),
Cd (ppm), Cr (ppm), Co (ppm), Pb (ppm), Hg (ppm),
Mo (ppm), Ni (ppm), Se (ppm), Cu (%) and Zn (%)*

The units above are those required for reporting data from this Magruder sample. They may not be the units required on a commercial fertilizer label.

Note: This Magruder Check Sample material is not to be used in the manufacture of products nor applied to any crops or for other fertilizer uses. It is intended for analytical testing purposes only.

SDS for this product can be found at:

<https://www.magruderchecksample.org/SDS/251141GuarSDS.pdf>

SDS for Magruder 251141

SECTION 1	PRODUCT AND COMPANY IDENTIFICATION
Trade Name:	Phosphate Rock
Chemical Name:	Carbonate- Fluorapatite
CAS Number:	12415-02-0
Chemical Family:	Minerals
Synonyms:	Phos Rock Wet Rock Florida Land Pebble Francolite
Primary Use:	Raw Material in the Production of Phosphate Fertilizers
Company Information:	THE MOSAIC COMPANY 3033 Campus Drive Plymouth, MN 55441 www.mosaicco.com 800-918-8270 or 763-577-2700 8 AM to 5 PM Central Time US
Emergency Telephone:	EMERGENCY OVERVIEW 24 Hour Emergency Telephone Number: <u>For Chemical Emergencies:</u> Spill, Leak, Fire or Accident Call CHEMTREC North America: (800) 424-9300 (reference CCN201871) Others: (703) 527-3887 (collect)

SECTION 2	HAZARD IDENTIFICATION
GHS Classification:	Not Classified
	Signal Word: n/a Hazard Statement(s) Not Applicable
Label Elements:	
Prevention:	Not Applicable
Response:	Not applicable
Storage:	Not applicable
Disposal:	Not applicable

SECTION 3	COMPOSITION INFORMATION ON INGREDIENTS
Formula:	Ca ₅ (PO ₄) ₃ (F,Cl,OH)
Composition:	Carbonate - Fluorapatite Silica as SiO ₂
	CAS 12415-02-0 CAS 7631-86-9
	60-90% 2.5-5%
	Not applicable

SECTION 4		FIRST AID MEASURES
First Aid Procedures:	Eyes:	May cause irritation due to mechanical action. Rinse eye with water to remove dust or grit.
	Skin:	Prolonged or repeated contact may dry skin and cause irritation. Avoid contact with skin and clothing. Wash thoroughly after handling.
	Inhaled:	Move victim to fresh air. Administer oxygen if breathing is difficult.
	Ingestion:	Rinse mouth. Obtain medical attention immediately if ingested.
Note to Physician:	All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.	

SECTION 5		FIRE FIGHTING MEASURES
Extinguishing Media:	Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff. Prevent firefighter water from entering the environment. Small fires: Water spray, foam, dry chemical or CO ₂ Large fires: Water spray, fog or foam	
Protection of Firefighters:	Positive pressure, self-contained breathing apparatus is required.	

SECTION 6		ACCIDENTAL RELEASE MEASURES
Response Techniques:	Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. As an immediate precautionary measure use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Keep unauthorized personnel away.	

SECTION 7		HANDLING AND STORAGE
Handling:	Use only with adequate ventilation. Minimize dust generation and accumulation. Wear appropriate personal protective equipment, avoid direct contact. Avoid breathing dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.	
Storage:	Keep container closed. Store in a dry, well-ventilated place.	

SECTION 8		EXPOSURE CONTROLS / PERSONAL PROTECTION
Engineering Controls:	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).	

Personal Protective Equipment (PPE):	Eye/Face:	Wear safety goggles.
	Skin:	Wear appropriate gloves. Wear long sleeves and/or protective coveralls.
	Respiratory:	For limited exposure use an N95 dust mask. For prolonged exposure use an air- purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.
	Other:	A source of clean water should be available in the work area for flushing eyes and skin.
General Hygiene Considerations:	Wash thoroughly after handling Use adequate ventilation	
Exposure Guidelines:	OSHA Permissible Exposure Limits (PEL):	Silica (Quartz): $\frac{10 \text{ mg} / \text{m}^3}{\% \text{SiO}_2 + 2}$
	ACGIH Threshold Limit Value (TLV):	Silica (Quartz): 0.025 mg/m ³ TWA

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES		
Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).			
Appearance:	Multicolored pebble or fine granules	Vapor Pressure (mm Hg):	Not applicable
Odor:	None	Vapor Density (air=1):	Not applicable
Odor Threshold:	No data available	Specific Gravity or Relative Density:	2.9 – 3.1 MT/m3
Physical state:	Solid	Bulk Density:	Loose 80 - 150 lbs/ft ³
pH:	Not applicable	Solubility in Water:	Less than 1%
Melting Point/ Freezing Point:	Not applicable	Partition coefficient:	No data available
Boiling Point:	Not applicable	Auto-Ignition Temperature:	Not applicable
Flash Point:	Not applicable	Decomposition Temperature:	Not applicable
Evaporation Rate:	No data available	Viscosity:	No data available
Flammability:	Not applicable	Volatility:	Not applicable
Upper/Lower Flammability or explosive limits	Not applicable		

SECTION 10	STABILITY AND REACTIVITY
Chemical Stability:	Stable under normal conditions of storage and handling.
Conditions to Avoid:	Excess heat.
Incompatible Materials:	Avoid contact with strong acids, will cause the release of toxic and irritating fluoride and Pox gases.
Hazardous Decomposition Products:	If heated to the point of decomposition, fumes of phosphorus oxides and fluorides may be released.
Corrosiveness:	Not applicable.

Hazardous Polymerization:	Will not occur
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SECTION 11	TOXICOLOGICAL INFORMATION		
Substance:	Carbonate - Fluorapatite		
Acute Oral Toxicity:	No data available		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	No data available		
Substance:	Silica as SiO ₂		
Acute Oral Toxicity:	No data available		
Acute Inhalation Toxicity:	No data available		
Acute Dermal Toxicity:	No data available		
Mutagenesis:	No data available	Target Organ	No data available
Developmental Toxicity:	No data available	Carcinogenicity	No data available

SECTION 12	ECOLOGICAL INFORMATION
Ecotoxicology:	No data available

SECTION 13	DISPOSAL CONSIDERATIONS
	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14	TRANSPORT INFO
Regulatory Status:	Not regulated
Identification Number:	HTS 2510.10.00 or 2510.20.00
Hazard Class:	Not applicable
Proper Shipping Name	Not applicable
Packing Group	Not applicable
DOT Emergency Response Guide Number:	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable
MARPOL Annex V:	Non-HME
IMO/IMDG:	Not applicable

SECTION 15	REGULATORY INFORMATION
CERCLA:	Not listed
RCRA 261.33:	Not listed

SARA Title III: (Exemptions at 40 CFR, Part 370 may apply for agricultural use, or for quantities of less than 10,000 pounds on-site.)	Section 302/304: Not listed		RQ: No		TPQ: No
	Section 311/312:				
	Acute: Yes	Chronic: No	Fire: No	Pressure: No	Reactivity: No
	Section 313: Not listed				
NTP, IARC, OSHA:	This material has not been identified as a carcinogen by NTP, IARC, or OSHA.				
Canada DSL and NDSL:	DSL: Yes NDSL: Not listed				
TSCA:	Listed on the TSCA Inventory				
CA Proposition 65: (Health & Safety Code Section 25249.5)	 WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov				
WHMIS:	WHMIS 2015 This SDS has been prepared according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR.				

SECTION 16	OTHER INFORMATION
Disclaimer:	The information in this document is believed to be correct as of the date issued. HOWEVER, MOSAIC MAKES NO GUARANTEE, REPRESENTATION, OR WARRANTY, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO THE USE OF THIS PRODUCT. User is responsible for determining whether this product is fit for a particular purpose and suitable for user's method of use or application and assumes the risk of use thereof. The conditions and use of this product are beyond the control of Mosaic, and Mosaic disclaims any liability for loss or damage incurred in connection with the use or misuse of this product. Each user should review the recommended industrial hygiene and safe handling procedures in the specific context of the intended use and determine whether they are appropriate.
Preparation:	The preparation of this SDS was in accordance with ANSI Z400.1-2010.
Revision Date:	December 31, 2018
Sections Revised:	4, 6, 15, 16
SDS Number:	MOS 200007
References:	Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – 4 th Edition 2011 OSHA Hazard Communication Standard, 2012 MARPOL Annex V; The Fertilizer Institute (TFI), 2003; TOXNET

Other Hazard Classifications:	NFPA HAZARD CLASS		HMIS HAZARD CLASS		WHMIS 1988 (CPR) HAZARD CLASS	
	Health:	1	Health:	1	Symbol	N/A
	Flammability:	0	Flammability:	0	Classification	Not WHMIS Controlled
	Instability:	0	Physical Hazard:	0	Sub Class	N/A
	Special Hazard:	None	PPE:	Section 8		
	WHMIS 2015 (HPR) HAZARD CLASS					
	Signal Word	Not applicable				
	Symbol	Not applicable				
	Classification	Not applicable				
	Hazard Statements	Not applicable				