

Safety Data Sheet

| SECTION 1 | PRODUCT AND COMPANY IDENTIFICATION | | |
|------------------|---|--|--|
| Trade Name: | Phosphate Rock | | |
| Chemical Name: | Carbonate-Fluorapatite | | |
| CAS Number: | 1306-05-4 | | |
| Chemical Family: | Minerals | | |
| Synonyms: | Phos Rock | | |
| | Wet Rock | | |
| | Florida Land Pebble | | |
| | Francolite | | |
| Primary Use: | Raw Material in the Production of Phosphate Fertilizers | | |
| Company | Association of Fertilizer and Phosphate Chemist | | |
| Information: | P.O. Box 1645 | | |
| | Bartow, FL 33831 | | |
| | www.apfc.net | | |
| | 863-800-9319 8 AM to 5 PM Eastern Time US | | |
| Emergency | EMERGENCY OVERVIEW | | |
| Telephone: | 24 Hour Emergency Telephone Number: | | |
| | For Chemical Emergencies: | | |
| | Spill, Leak, Fire or Accident | | |
| | Call CHEMTREC | | |
| | North America: (800) 255-3924 (reference MIS1010185) | | |
| | Others: (813) 248-0585 (collect) | | |

| SECTION 2 | HAZARD IDENTIFICATION | | | |
|-----------------|-----------------------|----------------|--|--|
| GHS | Not Applicable | Not Applicable | | |
| Classification: | | | | |
| | Signal Word: WARNING | | | |
| | Hazard Statement(s) | | | |
| | Not Applicable | | | |
| Label Elements: | | | | |
| Prevention: | Not Applicable | | | |
| Response: | Not applicable | Not applicable | | |
| Storage: | Not applicable | Not applicable | | |
| Disposal: | Not applicable | Not applicable | | |

| SECTION 3 | СОМРО | COMPOSITION INFORMATION ON INGREDIENTS | | | |
|--------------|--------------------|--|--------|----------------|--|
| Formula: | Ca5(PO4)3(F,Cl,OH) | | | | |
| Composition: | Carbonate - | CAS 12415-02-0 | 60-90% | Not applicable | |
| | Fluorapatite | CAS 7631-86-9 | 2.5-5% | | |
| | Silica as SiO2 | | | | |

| SECTION 4 | | FIRST AID MEASURES |
|--------------------------|-------|--|
| First Aid Procedures: | Eyes: | Flush with plenty of water for at least 15 minutes. Get medical attention as soon as possible. |

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| | Skin: | Wash skin with soap and water. Take off contaminated clothing and wash before reuse. If irritation develops and persists, get medical attention. |
|--------------------|------------------|---|
| | Inhaled: | Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. |
| | Ingestion: | Rinse mouth. Do not give anything by mouth to an unconscious person. Obtain medical attention immediately if ingested. |
| Note to Physician: | patient. Conside | ould be based on observed signs and symptoms of distress in the tration should be given to the possibility that overexposure to nan 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 CO2 Large fires: Water spray, fog or foam |
| Protection of Firefighters: | Positive pressure, self-contained breathing apparatus is required. |

| SECTION 6 | ACCIDENTAL RELEASE MEASURES |
|-------------|--|
| Response | Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate |
| Techniques: | personal protective equipment, avoid direct contact. As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. |
| | 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 | Good general | ventilation should be used. Ventilation rates should be matched to | |
| Controls: | 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. | |
| (FFL). | Skin: | Wear appropriate gloves. Wear long sleeves and/or protective coveralls. | |



| | Respiratory: Other: | 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. 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 Perm (PEL): | issible Exposure Limits | Silica (Quartz): 10 mg / m³ %SiO2 + 2 |
| | ACGIH Thres | shold Limit Value (TLV): | Silica (Quartz): 0.025 mg/m³ 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 | 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 | |
| Physical state: | Solid | Bulk Density: | Loose 80 - 150 lbs/ft ³ (1280 - 2400 kg/m 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 | Stable under normal conditions of storage and handling. |
| Stability: | |
| Conditions to | Excess heat. |
| Avoid: | |
| Incompatible | Avoid contact with strong acids, will cause the release of toxic and irritating fluoride |
| Materials: | and Pox gases. |
| Hazardous | If heated to the point of decomposition, fumes of phosphorus oxides and fluorides |
| Decomposition | may be released. |
| Products: | |

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| Corrosiveness: | Not applicable. |
|-----------------|-----------------|
| Hazardous | Will not occur |
| Polymerization: | |

| SECTION 11 | TOXICOLOGICAL INFORMATION | | | | | | |
|------------------|---------------------------|-----------------|-------------------|--|--|--|--|
| Substance: | Carbonate - Fluorapati | te | | | | | |
| Acute Oral | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Acute Inhalation | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Acute Dermal | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Substance: | Silica as SiO2 | | | | | | |
| Acute Oral | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Acute Inhalation | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Acute Dermal | No data available | | | | | | |
| Toxicity: | | | | | | | |
| Mutagenesis: | No data available | Target Organ | No data available | | | | |
| Developmental | No data available | Carcinogenicity | No data available | | | | |
| Toxicity: | | | | | | | |

| 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 | Not regulated |
| Status: | |
| Identification | HTS 2510.10.00 or 2510.20.00 |
| Number: | |
| Hazard Class: | Not applicable |
| Proper Shipping | Not applicable |
| Name | |
| Packing Group | Not applicable |
| DOT Emergency | Not applicable |
| Response Guide | |
| Number: | |
| Transport in bulk | Not applicable |
| according to | |
| Annex II of | |
| MARPOL 73/78 | |
| and the IBC | |
| Code: | |



| MARPOL Annex | Non-HME |
|--------------|----------------|
| V: | |
| IMO/IMDG: | Not applicable |

| SECTION 15 | REGULATORY INFORMATION | | | | | | | | |
|--|--|------------------------------|----|----------|---------|-------|----------------|--|--|
| CERCLA: | Not listed | | | | | | | | |
| RCRA 261.33: | Not listed | | | | | | | | |
| SARA Title III: | Section 302/304: Not RQ: No TPQ: No | | | | | | | | |
| (Exemptions at 40 CFR, Part 370 | listed | | | | | | | | |
| may apply for | Section 311/312 | 2: | • | | | • | | | |
| agricultural use, or for quantities | Acute: Yes | Chronic: | No | Fire: No | Pressur | e: No | Reactivity: No | | |
| of less than 10,000 pounds on-site.) | 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 TS | Listed on the TSCA Inventory | | | | | | | |
| CA Proposition 65: (Health & Safety Code Section 25249.5) | Warning: This product contains substances known to the State of California to cause cancer and/or birth defects or other reproductive harm. | | | | | | | | |
| 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. WHMIS 1988 (Repealed) Classifications and/or symbols from the Controlled Products Regulations (CPR) are included in the Other Hazardous Classifications in Section 16 for reference. | | | | | | | | |

| SECTION 16 | OTHER INFORMATION |
|--------------|---|
| Disclaimer: | The information in this document is believed to be correct as of the date issued. HOWEVER, AFPC 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 AFPC, and AFPC 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: | February 14, 2018 | | | | | | | | |
|-------------------|---|---------------|-------|-------------------|--------------|-----|------------------|--------------|--|
| Sections Revised: | All | | | | | | | | |
| SDS Number: | AFPC 000001 | | | | | | | | |
| References: | Globally Harmonized System of Classification and Labelling of Chemicals (GHS) - | | | | | | | | |
| | 4th Edition 2011 | | | | | | | | |
| | OSHA Hazard Communication Standard, 2012 | | | | | | | | |
| | MARPOL Anne | x V; The Fert | ilize | r Institute (TF | I), 2003; | TOX | NET | | |
| Other Hazard | NFPA HAZARD CLASS | | | HMIS HAZARD CLASS | | | WHMIS 1988 (CPR) | | |
| Classifications: | Health: | 1 1 | | Health: | 1 | | HAZARD CLASS | | |
| | i iodiii. | • | | | | | Symbol | N/A | |
| | Flammability: | 0 | | Flammability: | 0 | | Classification | Not WHMIS | |
| | Instability: | 0 | | Physical | 0 | | | Controlled | |
| | instability. | | | Hazard: | | | Sub Class | N/A | |
| | Special Hazard: | None | | PPE: | Section 8 | | | | |
| | | | | | 0 | | | | |
| | NAULINAIO 0045 / | LIDD) Harring | 1 | | | | | | |
| | WHMIS 2015 (Class | HPR) Hazard | | | | | | | |
| | | | | | | | | | |
| | Signal Word | Not | | | | | | | |
| | | applicable | | | | | | | |
| | Symbol | Not | | | | | | | |
| | | applicable | | | | | | | |
| | Classification | Not | 1 | | | | | | |
| | J.accinication | applicable | | | | | | | |
| | Hazard | Not | 1 | | | | | | |
| | Statements | applicable | | | | | | | |
| | | 11 | | | | | | | |