NBL Program Office
U. S. Department of Energy

Safety Data Sheet

PHOSPHATE ROCK

SECTION 1: CHEMICAL PRODUCTS & COMPANY IDENTIFICATION

NBL Program Office
U. S. Department of Energy,
1 Science.gov Way,
Oak Ridge, TN 37830
1-240-780-6842

Emergency Phone Numbers: 1-240-780-6842

Product Name: Phosphate Rock

Other Identifiers/Synonyms: CRM 1-A, Apatite

Use and Restriction: This material is prepared for use as a standard or in inter-laboratory comparison programs at analytical laboratories, which routinely handle uranium and/or plutonium. NBL expects that recipients of their material are in compliance with 29 CFR 1910.1200(h) which requires employers to provide employees with effective information and training on hazardous chemicals in their work area.

SECTION 2: HAZARDS IDENTIFICATION

Chemical Hazards

OSHA Hazard: Physical Hazard: None. Health Hazard: Irritant.

Target Organs: Eyes, skin and respiratory system.

GHS Label Elements

Pictogram:

Revision Date: June 24, 2020

Signal Word: WARNING

Hazard Statements:	May cause irritation of skin, lungs and eyes (Category 4)
Precautionary Statements:	Avoid breathing dust Do not get in eyes or on skin or on clothing. Do not eat, drink or smoke when using

This reference material is composed of raw rock that has been pulverized, milled and blended. The uranium found in this material is that naturally present in the rock. The uranium content of this reference material is so low that it is not considered to be a radioactive material by Department of Transportation definitions.

This is a powdered material, which may cause irritation to skin, eyes, or mucous membranes. Care should be taken to avoid inhalation or ingestion.

NFPA RATINGS (SCALE 0-4): HEALTH=U FIRE=0 REACTIVITY=0

CERCLA Ratings (SCALE 0-3): HEALTH = U; FIRE = 0; REACTIVITY = 0; PERSISTENCE = 3

NFPA RATINGS (SCALE 0-4): HEALTH = U; FIRE = 0; REACTIVITY = 0

CARCINOGEN STATUS:

OSHA:	N
NTP:	N
IARC:	N

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component: Phosphate Rock

Chemical Family: Powdered rock. Mineral.

CAS Number: 1306-05-4

Concentration: 100 Weight %. Other Contaminants: Uranium 0.0153 Weight % (See Certificate of Analysis)

SECTION 4: FIRST AID MEASURES

Necessary First –aid Measures:

EYES: Flush with running water.

INHALATION: Remove to fresh air. Give oxygen with artificial respiration as needed. Seek medical attention for treatment, observation and support as needed.

SKIN CONTACT: Wash with soap and water.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazard: Negligible fire hazard when exposed to heat or flame.

Suitable Extinguishing Media: Dry chemical, carbon dioxide, water spray, or regular foam. (See the *Emergency Response Guidebook*, ERG, developed jointly by Transport Canada (TC), and the U. S. Department of Transportation (DOT), and the Secretariat of Transportation and Communications of Mexico (SCT).)

For Larger Fires, use water spray or fog (flooding amounts) (*Emergency Response Guidebook*, ERG).

Special Protective Equipment and Precautions for Fire-Fighters: Move container from fire area if you can do it without risk. Apply cooling water to sides of containers exposed to flames until well after fire is out (*Emergency Response Guidebook*, ERG).

Do not move damaged containers; move undamaged containers out of fire zone. For massive fire in cargo area, use unmanned hose holder or monitor nozzles (*Emergency Response Guidebook*, ERG).

Contact the local, State, or Department of Energy radiological response team. Use suitable agent for surrounding fire. Cool containers with flooding amounts of water; apply from as far a distance as possible. Avoid breathing dusts or vapors, keep upwind. Keep unnecessary people out of area until declared safe by radiological response team.

Hazardous Combustion Products: Thermal decomposition may release toxic/hazardous gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL SPILL: Wear appropriate personal protective equipment (safety glasses or goggles, body coverall or lab coat, gloves and NIOSH/MSHA approved respiratory protection against dust). Avoid getting in eyes or on skin. Avoid breathing dust or ingesting.

SECTION 7: HANDLING AND STORAGE

Observe all Federal, State and local regulations when storing this substance.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exercise precautions appropriate for an analytical chemistry laboratory environment and wear appropriate personal protective equipment (lab coat, safety glasses or googles, gloves).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Ecru colored powder
Odor: Data not available
Boiling point: Decomposes
pH: Data not available
Melting point: 1300°C (2372°F) decomposes
Flammability: Non-flammable solid
Specific Gravity: Data not available
Evaporation rate: Data not available
Water Solubility: Insoluble
Decomposition temperature: Data not available
Solvent solubility: Nitric acid, sulfuric acid
Viscosity: Data not available
Flashpoint: Non-flammable solid

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Stable under normal temperatures and pressures.

Conditions to Avoid: No potentially hazardous conditions could be found in the literature, nor could any accidents be found in which phosphate rock reacted in a hazardous manner.

SECTION 11: TOXICOLOGY INFORMATION

Particulate matter may irritate and damage the eyes.

No toxicology information specific to phosphate rock is available.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Impact Rating (0-4): No data available

Acute Aquatic Toxicity: No data available

Degradability: No data available

Log Bioconcentration Factor (BCF): No data available

Log Octanol/water partition coefficient: No data available

SECTION 13: DISPOSAL INFORMATION

Observe all Federal, State and local Regulations when disposing of this substance.

SECTION 14: TRANSPORTATION INFORMATION

The U.S. Department of Transportation (D.O.T.) Code of Federal Regulations (49 CFR Parts 100-185), the International Air Transportation Association (IATA), International Civil Aviation Organization (ICAO) and International Maritime Organization (IMDG) are all factored into the classification and transport of material.

Proper Shipping Name:
Hazard Class:
UN/ID Number:
Special Information:

To be determined on a case by case basis.

Packing Group:

Classification of substances with multiple hazards must be determined in accordance with the criteria presented in the above mentioned regulations. Due to the various quantities/combinations of materials being shipped at one time, the information above must be determined based on the characteristics of the specific shipment.

SECTION 15: REGULATORY INFORMATION

TSCA STATUS: N

CERCLA SECTION 103 (40 CFR 302.4):	N
SARA SECTION 302 (40 CFR 355.30):	N
SARA SECTION 304 (40 CFR 355.40):	N
SARA SECTION 313 (40 CFR 372.65):	N
OSHA PROCESS SAFETY (29 CFR 1910.119):	N
CALIFORNIA PROPOSITION 65:	N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40 CFR 370.21)

ACUTE HAZARD:	N
CHRONIC HAZARD:	N
FIRE HAZARD:	N
REACTIVITY HAZARD:	N
SUDDEN RELEASE HAZARD:	N

SECTION 16: OTHER INFORMATION

This material is prepared for use as a standard or in inter laboratory comparison programs at analytical laboratories, which routinely handle uranium and/or plutonium. The New Brunswick Laboratory (NBL) assumes that recipients of this material have developed internal safety procedures, which guard against accidental exposure to radioactive and toxic materials, contamination of the laboratory environment, or criticality. NBL further expects that personnel who handle radioactive materials have been thoroughly trained in the safety procedures developed by and for their Laboratory.

The information and recommendations set forth herein are presented in good faith and believed to be correct as of the revision date. However, recipients of this material should use this information only as a supplement to other information gathered by them, and

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