

Material Safety Data Sheet

Update: _____

1. Product Identification

Synonyms: UREA PHOSPHATE

CAS No.: 4861-19-2

Molecular Weight: 158.0

Chemical Formula: $\text{H}_3\text{PO}_4 \cdot \text{CO}(\text{NH}_2)_2$

2. Composition/Information on Ingredients

| Ingredient | CAS No | Percent |
|----------------|-----------|-----------------------------------|
| Urea Phosphate | 4861-19-2 | Weight percent will vary by grade |

3. Hazards Identification

Emergency Overview

Clear green liquid, no odor

CAUTION! CAN IRRITATE SKIN, EYES, MAY CAUSE CUCOUS MEMBRANE IRRITATION OSHA HAZ CATEGORY ---IRRITANT

CERCLA RATINGS (SCALE 0-3)

Health: 1 - Slight

Flammability Rating: 0 - None

Reactivity Rating: 0 - None

Persistence: 0 - None

Primary Route(s) of Entry: Skin or eye contact is the most likely exposure, Ingestion is possible. Inhalation of fertilizer solutions is unlikely unless unusual conditions of use result in aerosol production.

Target Organs: Skin, eyes

Potential Health Effects

Inhalation:

May cause irritation to mucous membranes, throat irritation, coughing, or difficulty in breathing.

Ingestion:

Large doses of this solution may cause nausea, vomiting, and stomach pain or cramps.

Skin:

Prolonged contact can cause irritation and possibly rash or blistering.

Eye Contact:

May cause irritation.

Symptoms of Overexposure:

Acute:

Ingestion of some phosphate may cause a shock-like state, a fall in blood pressure, slow pulse, bluish skin color (cyanosis) comm., and painful muscular spasms (tetany). Other symptoms such as convulsion may result from ingestion of large amounts of this liquid.

Chronic:

Repeated and prolonged contact with irritants may cause conjunctivitis or dermatitis.

Notes to Physician: In the case of inhalation, keep under medical supervision until there is no risk of acute pulmonary edema or microbial infection. Persons with chronic respiratory or skin disease may be at increased risk from exposure.

4. First Aid Measures

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Skin :

Immediately wash thoroughly with soap and water. Remove contaminated clothing and shoes. Wash or clean before wearing again.

Eye:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

5. Fire Fighting Measures

Flashpoint:

Not flammable.

Flammable Limits:

Not flammable

Ammonia may evolve from this solution at high temperatures. Flammable limits of ammonia gas in air (by volume) are lower 16 , upper 25.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Fertilizer solutions will not burn. Urea phosphate is considered a fire retardant. Rise can evaporate product to dryness leaving crystals of urea and urea phosphate.

Special Information:

Fire lighting procedures are based on escaping ammonia gases. Wear full protective clothing and self-contained breathing apparatus. Apply water spray to knock down and absorb ammonia vapors.

6. Accidental Release Measures

Urea phosphate solutions are plant foods. However, large spills could possibly damage. Vegetable or cause illness in animals. Contamination of waterways could possible cause fish kills. Dike spill area to prevent spread and runoff into storm sewers and ditches that lead to waterways. Keep children and animals away from spills.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area at

temperatures below 65°C. Avoid mild steel containers. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

None required under normal conditional.

Personal Respirators (NIOSH Approved):

None required under normal conditional.

Skin Protection:

Wear rubber or protective gloves for during all handling operations.

Eye Protection:

Use chemical safety goggles during all handing operations.

9. Physical and Chemical Properties

Appearance:

Clear green liquid, no odor.

Odor:

Odorless.

Solubility:

Soluble in water.

Specific Gravity:

1.221-1.225 (20°C)

PH:

2.10.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Will effervesce at 190°C.

Melting Point:

117.3C

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Conditions to Avoid:

Avoid temperatures above 65°C. Avoid mild steel containers

Do not mix with products containing calcium (such as calcium nitrate) Mixing will produce a precipitate, calcium phosphate, at PH 5.0 or above.

11. Toxicological Information

No data found

Potential carcinogen data (zmc, ntf, OSHA).

None found for this solution. For health emergencies call your local poison centre

12. Ecological Information

Urea phosphate solutions are plant foods. However, large spills could possibly damage. Vegetable or cause illness in animals. Contamination of waterways could possible cause fish kills. Dike spill area to prevent spread and runoff into storm sewers and ditches that lead to waterways.

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

If uncontaminated, reconvert and as product. If contaminated with other materials, the nature and extent of contamination may require use of specialized disposal methods. Consult local, state, or federal regulatory agencies for acceptable disposal procedures and disposal locations.

14. Transport Information

DOT Proper shipping Name: Not applicable
Dot Hazard Class: This solution not regulated by DOT
UN/NA No: Not listed
Packaging Group: Not applicable
ERC No: Not applicable

15. Regulatory Information

Reportable Quantity—Cercal none established
SARA TITLE III (EPCRA) none established

16. Other Information

NFPA Ratings: Health: 2 Flammability: 0 Reactivity: 1

Label Hazard Warning:

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

Label Precautions:

Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Avoid breathing dust.
Keep container closed.
Use with adequate ventilation.

Label First Aid:

If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Product Use:

Laboratory Reagent.

Revision Information:

No changes.

Disclaimer:

***** **End of MSDS****

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