



Material Safety Data Sheet

Product Name

Di-Ammonium Phosphate (DAP)

Section 1 - Chemical Product and Company Identification

| Product Name | MSDS No. |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Di-ammonium Phosphate, DAP, 18-46-0 | 0001 |
| Chemical Name | Version No. |
| Ammonium phosphate dibasic | 02 |
| Chemical Formula | |
| $(\text{NH}_4)_2\text{HPO}_4$ | |
| Material Primary Use | Next Revision |
| Fertilizer | September,2023 |
| Synonyms | Company Identification |
| 18-46-0, Di-ammonium hydrogen phosphate, DAP, Dibasic ammonium phosphate | Maaden Phosphate Company P.O Box 11 10 Jubail 31961 KSA |
| Emergency Contact | For Information |
| +966-13-342-6666 | +966-3-342-6688 cc@maaden.com.sa |

Section 2 -

Composition, Information on Ingredients

| Chemical Name | CAS No. | Percent |
|-----------------------|-----------|---------|
| Di-ammonium phosphate | 7783-28-0 | >85 |

Section 3 -

Physical and Chemical Properties

| | | | |
|----------------------|------------------------------|------------------|-------------------------------|
| Physical State | Solid (crystalline granules) | Molecular Weight | 132.7 |
| Appearance | Gray / Dark granules | Solubility | Very soluble |
| Odor | Odorless | Boiling Point | N/A |
| pH | 7.5 - 8 | Melting Point | 155 c (starts decomposing) |
| Vapor Pressure (kPa) | Negligible | Vapor Density | N/A |
| Viscosity | N/A | Evaporation Rate | N/A |
| Bulk Density | 930-960 kg/m 3 | Specific Gravity | 1.5-1.7 g/cm 3 |

Section 4 - Hazards Identification

Emergency Overview

| Target Organs | Toxicity |
|----------------------------------|----------|
| Respiratory system, eye and skin | N/A |

Potential Health Effects

| Eye | Skin |
|---------------------------------------------------------|--------------------|
| The dust may produce eye discomfort causing irritation. | Irritation to skin |

Ingestion

The material is moderately discomforting to the gastrointestinal tract and may be harmful if swallowed. Such effects include vomiting, lethargy, fever and diarrhea. Considered an unlikely route of entry in commercial/industrial environments.

Inhalation

Over- Dust exposure may cause discomforting to the upper respiratory tract.

Chronic

None

Potential Environmental Effects

Environment

N/A

Section 5 - First Aid Measures

| | |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eyes | Remove contact lenses and flush eyes with water for at least 15 minutes, keeping eyelids open. Seek medical attention if irritation or discomfort persist. |
| Skin | Immediately remove all contaminated clothing. Wash affected areas thoroughly with water (and soap if available). Seek medical attention in event of irritation. |
| Ingestion | DO NOT induce vomiting. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water (or milk) to rinse out mouth. Seek medical advice. |
| Inhalation | Remove to fresh air. Encourage patient to blow nose to ensure clear breathing passages. Rinse mouth with water. Consider drinking water to remove dust from throat. Seek medical attention if irritation or discomfort persist. |
| Antidote | N/A |
| Notes to Physician | Treat symptomatically. |

Section 6 - Firefighting Measures

| | |
|----------------------------------|---------------|
| Flammability | Non-Flammable |
| Explosion Risk | N/A |
| Auto-Ignition Temperature | N/A |

| | |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash Point | N/A |
| Flammability Limits | N/A |
| Products of Combustion | Nitrogen and phosphorus oxides, and ammonia |
| Fire Incompatibility | Avoid reaction with hypochlorites, oxidizers, strong alkalis. |
| Explosion Hazard in The Presence of Various Substances | Non-explosive |
| Fire Fighting Media and Instructions | <ul style="list-style-type: none"> - Non-combustible. Use extinguishing media suitable for surrounding fire. - In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. |

NFPA Rating



Section 7 - Accidental Release Measures

| | |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Information | Non hazardous materials. |
| Small Spills | Collect spilled material and place it in a suitable container for use or disposal. |
| Large Spills | <ul style="list-style-type: none"> - Stop source of leak. Dike spill to keep out of sewer system or waterways. - Collect spilled material and place it in a suitable container for use or disposal. |

Section 8 - Handling and Storage

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|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Handling | Use with adequate ventilation and use Proper PPE. Always wash hands with soap and water after handling. |
| Storage | Store in a cool dry well ventilated area. |
| Additional Information | <ul style="list-style-type: none">- Keep away from heat and flame.- Work clothes should be laundered separately. |

Section 9 - Exposure Controls, Personal Protection

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|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | Wear NIOSH- approved respiratory protection for dust when ventilation is inadequate. A filtering face piece 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. |
| Personal Protection in Case of Large Release | Same as above |
| Exposure Limits | PEL: 15 mg/m ³ (for particulates) |

Section 10 - Personal Protective Equipment

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|--------------------|----------------------------------------|
| Eyes | Chemical Safety goggles or face shield |
| Skin | Chemical resistant gloves |
| Clothing | Protective clothing or coveralls. |
| Respirators | NIOSH/MSHA-approved respirator |

Section 11 - Stability and Reactivity

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|---------------------------------------------------|--------------------------------------------------------|
| Chemical Stability | Stable. |
| Instability Temperature | N/A |
| Conditions to Avoid | N/A |
| Incompatibilities with Other Materials | Highly reactive with oxidizing agents, acids, alkalis. |

Section 12 - Toxicological Information

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|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Significant Route of Exposure | Ingestion and inhalation |
| Toxicity to Animals | Used as a general purpose food additive in animal drugs, feeds, and related products. It is generally recognized as safe when used in accordance with good manufacturing |
| Toxicity to Animals | Chronic Effects on Humans |
| Other Effects on Humans | N/A |

Section 13 - Ecological Information

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|-----------------------------------------|------------------------------------------------------------------------------------------|
| Hazardous Decomposition Products | May yield oxides of phosphorus and ammonia. |
| Hazardous Polymerization | Will not occur. |
| Corrosivity | Corrosive to iron and mild steel, aluminum, zinc, and |
| Special Remarks | None |
| Eco-toxicity | Will release ammonium ions (hazardous to fish) and phosphate (may cause eutrophication). |
| Degradation | Inorganic mineral salts and oxides. |
| Environmental Fate | Not toxic |
| Special Remarks | None |

Section 14 - Disposal Considerations

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|-----------------------|--------------------------------------------------------|
| Waste Disposal | Dispose in a manner consistent with local regulations. |
|-----------------------|--------------------------------------------------------|

Section 15 - Transport Information

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|--------------------------------|-----------------------|
| DOT/ TDG Classification | Not Controlled |
| Shipping Name | DI-AMMONIUM PHOSPHATE |
| Hazard Class | N/A |



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|-------------------------------|------|
| UN Number | N/A |
| Packing Group | N/A |
| Special Provisions | None |
| Additional information | None |

Section 16 - Additional Information

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