



# Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

## 1. Identification of the Substance/Preparation and of the Company/Undertaking

### Product Identifier

**Product Name:** Diammonium Phosphate (DAP)

### Other means of identification

**EPA Pesticide Registration Number:**

### Recommended use of the chemical and restrictions on use

**Recommended use:** Granular Fertilizer

### Details of the supplier of the safety data sheet

#### **Company**

Regal Chemical Company  
600 Branch Dr.,  
Alpharetta, GA 30004

### Emergency telephone number

**Company Telephone:** (770) 475-4837

**Emergency Telephone:** Chemtrec 1-800-262-8200

## 2. Hazardous Identification

### **Classification:**

Skin Irrit. 2	H315
Eye Irrit. 2B	H320
STOT SE 3	H335
Aquatic, Acute 2	H401

**Signal Word (OSHA):** Warning

### **Hazard Statements:**

H315 - Causes skin irritation  
H320 - Causes eye irritation  
H335 - May cause respiratory irritation  
H401 - Toxic to aquatic life.

### **Hazard Symbols:**





# Safety Data Sheet

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## Precautionary Statements:

P261 - Avoid breathing dust

P264 - Wash hands thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

P273 - Avoid release to the environment.

P280 - Wear eye protection, face protection, protective clothing, and protective gloves.

P302+P352 - IF ON SKIN: Wash with plenty of water

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P312 - Call a POISON CENTER/doctor if you feel unwell

P332+P313 - If skin irritation occurs: Get medical advice/attention

P337+P313 - If eye irritation persists: Get medical advice/attention

P362 - Take off contaminated clothing

P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

P405 - Store locked up

P501 - Dispose of contents/container according to local, regional, national, and international regulations

## Other Hazard Statements:

Hazardous to the aquatic environment.

No additional information available.

## 3. Composition/Information on Ingredients

Substance type: Mono-constituent

Name	CAS Number	Concentration
(DAP) Diammonium phosphate (as $P_2O_5$ )	7783-28-0	46%
Total Nitrogen, as N**		18%
Flourides, as F		1%

\*\*Product contains diammonium phosphate as essential ingredient with small amounts of monoammonium phosphate, ammonium sulfate, urea, and aluminum/calcium/iron/magnesium compounds.

Mixtures: Not applicable

## 4. First Aid Measures

### First aid measures:

**Ingestion:** Do not induce vomiting. Seek medical attention if a large amount is swallowed. Get medical advice and attention if you feel unwell. Drink large amounts of water (or milk if available) to dilute stomach contents. Ingestion of small quantities is unlikely to cause toxic effect. Large quantities may give rise to gastro-intestinal disorders.

**General:** If medical advice is needed, have product container or label at hand.

**Eye Contact:** Immediately rinse with water for a prolonged period while holding the eyelids wide open. Obtain medical attention if irritation develops or persists.



# Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

**Skin Contact:** Wash skin thoroughly with mild soap and water. Obtain medical attention if irritation develops or persists.

**Inhalation:** If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.

**Most Important systems and effects, both acute and delayed:**

**Symptoms/injuries:** Irritation to eyes, skin and respiratory tract.

**Symptoms/injuries after inhalation:** Difficulty in breathing. Dry/sore throat. Symptoms may be delayed.

**Symptoms/injuries after skin contact:** May cause skin irritation.

**Symptoms/injuries after eye contact:** May cause eye irritation.

**Symptoms/injuries after ingestion:** If a large quantity has been ingested: Abdominal pain. Diarrhea. Nausea. Vomiting.

**Indication of any immediate medical attention and special treatment needed:** No additional information available.

## 5. Fire-Fighting Measures

**Suitable extinguishing media:** Chemical type foam, Carbon Dioxide (CO<sub>2</sub>), dry chemical, water fog.

**Specific Hazards:**

**Fire hazard:** Under conditions of fire this material may produce: Ammonia.

**Explosion hazard:** Product is not explosive.

**Reactivity:** Stable at ambient temperature and under normal conditions of use.

**Advice for firefighters:**

**Firefighting instructions:** Keep upwind. Under conditions of fire this material may produce: Ammonia.

**Protection during firefighting:** Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

**Other information:** Do not allow run-off from firefighting to enter drains or water courses.

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:**

**General measures:** Do not breathe fumes from fires or vapors from decomposition.

**For non-emergency personnel:**

Protective equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency procedures: Collect as any solid. Ventilate area.

**For emergency responders:**

Protective equipment: Wear suitable protective clothing, gloves, and eye/face protection.

Emergency procedures: If possible, stop flow of product. Contain and collect as any solid. Ventilate area.

**Environmental precautions:** If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of



# Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

accident or road spill notify CHEMTREC at 800-424-9300. In other countries call CHEMTREC at (International code) +1-703-527-3887.

## **Methods and material for containment and cleaning up:**

**For containment:** If contaminated with other materials, contain and collect as any solid in suitable containers. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected. Prevent large quantities from contacting vegetation.

**Methods for cleaning up:** Recover the product by vacuuming, shoveling or sweeping and place in appropriate container to be disposed at an appropriate disposal facility according to current applicable laws and regulations and product characteristics at the time of disposal. Provide adequate ventilation. Avoid generation of dust during clean-up of spills. If uncontaminated, recover and reuse product. Practice good housekeeping – spillage can be slippery on smooth surface either wet or dry.

**Reference to other sections:** No additional information available

## **7. Handling and Storage**

### **Precautions for safe handling:**

**Additional hazards when processed:** When heated, material emits irritating fumes.

**Precautions for safe handling:** Handle in accordance with good industrial hygiene and safety procedures. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product.

### **Conditions for safe storage, including any incompatibilities:**

## **8. Exposure Controls/Personal Protection**

### **Control Parameters**

<b>Diammonium Phosphate (7783-28-0) as P<sub>2</sub>O<sub>5</sub></b>		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> – inhalable fraction 3 mg/m <sup>3</sup> – respirable fraction
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> – particulate 5 mg/m <sup>3</sup> – respirable
<b>Fluorides</b>		
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	2.5 mg/ m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2.5 mg/ m <sup>3</sup>

### **Exposure controls**

**Appropriate engineering controls:** Ensure adequate ventilation, especially in confined areas. Avoid high dust concentration.

**Personal protective equipment:** Gloves. Safety glasses. Protective clothing.

**Hand protection:** Impermeable protective gloves.

**Eye protection:** Protective goggles.



# Safety Data Sheet

Issue Date: 11/25/2015

Revision Date: N/a

Version: 1

**Skin and body protection:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wear suitable protective clothing. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

**Respiratory protection:** Wear NIOSH approved respiratory protective equipment when exposure exceeds the OSHA nuisance dust standard of 15 mg/m<sup>3</sup> or the ACGIH nuisance dust limit of 10 mg/m<sup>3</sup> for the eight hour time weighted average. When stored in closed area, a self-contained breathing apparatus is required to protect against ammonia gas.

**Environmental exposure controls:** Ensure adequate ventilation, especially in confined areas.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

**Appearance:** Granular solid  
**Odor:** Ammonia  
**Odor Threshold:** No data available

<u>Property</u>	<u>Values</u>
pH:	8.0 (conc: 1% at 20°C)
Melting point / Freezing Point	155 °C (302°F) (decomposes)
Boiling Point / Boiling Range	Decomposes
Flash Point (Test Method)	Not applicable
Flammability (solid, gas)	Not flammable
Vapor Pressure	< 1 mm Hg (at 20°C)
Relative Density	No data available
Solubility(ies)	Water: 588 g/l (at 20°C)
Decomposition Temperature	No data available
Viscosity	No data available
Other	No additional information available

## 10. Stability and Reactivity

**Reactivity:** Stable at ambient temperature and under normal conditions of use.

**Chemical Stability:** Stable at standard temperature and pressure.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Welding or hot work on equipment or plant which may have contained fertilizer should not be done without first washing thoroughly to remove all fertilizer.

**Incompatible Materials:** Alkalis and caustic products; strong acids; copper and its alloys.

**Hazardous Decomposition Products:** Ammonia is released upon reaction with strong bases or from thermal decomposition.

## 11. Toxicological Information

**Acute toxicity:** Not classified



# Safety Data Sheet

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(DAP) Diammonium phosphate (7783-28-0)	
LD50 oral rat	6500 mg/kg
LD50 dermal rabbit	> 7950 mg/kg
Additional information	This compound is listed by the FDA as generally recognized as safe (GRAS) and may be used as a food additive, for both human food and ruminant feed, according to prescribed conditions.

**Skin corrosion/irritation:** Causes skin irritation.

pH: 8.0 (conc: 1 % at 20 °C (solution))

**Serious eye damage/irritation:** Causes eye irritation.

pH: 8.0 (conc: 1 % at 20 °C (solution))

**Respiratory or skin sensitisation:** Not classified

**Germ cell mutagenicity:**

OECD 471: Bacterial reverse mutation assay, *S. typhimurium*: Negative

OECD 473: Chromosome aberration test, Chinese hamster ovaries: Negative

**Carcinogenicity:** Not classified

**Reproductive toxicity:** Not classified. OECD 422: NOAEL, Rat = 1,500 mg/kg/day

**Specific target organ toxicity (single exposure):** May cause respiratory irritation.

**Specific target organ toxicity (repeated exposure):** Not classified

(DAP) Diammonium phosphate (7783-28-0)	
NOAEL (oral,rat,90 days)	250 mg/kg bodyweight/day OECD Guideline 422

**Aspiration hazard:** Not classified

## 12. Ecological Information

<b>Ecotoxicity:</b>	<b>EPA Ecological Toxicity rating :</b>	Slightly toxic to practically non-toxic to aquatic organisms based on the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) acute toxicity ratings.
	<b>Acute Toxicity to Fish:</b>	(Coho salmon, Chinook salmon, Rainbow trout, Bluegill, Large mouth
	<b>Chronic Toxicity to Fish:</b>	No data available
	<b>Acute Toxicity to Aquatic Invertebrates:</b>	(Amphipod) 96-hr: LC <sub>50</sub> = 40-52 mg/L; (Snails, worm) 96-hr: LC <sub>50</sub> = 1,005 - 2,472 mg/L.
	<b>Chronic Toxicity to Aquatic Invertebrates:</b>	No data available
	<b>Toxicity to Aquatic Plants:</b>	( <i>Selenastrum capricornutum</i> ) 72-hr: NOEC (stimulation) = 3.57 mg DAP/L; NOEC (toxicity) = 97.1 mg DAP/L.
	<b>Toxicity to Bacteria:</b>	No data available
	<b>Toxicity to Soil Dwelling Organisms:</b>	No data available
	<b>Toxicity to Terrestrial Plants:</b>	No data available
<b>Environmental Fate:</b>	<b>Stability in Water:</b>	Stable
	<b>Stability in Soil:</b>	Stable
	<b>Transport and Distribution:</b>	Calculated, fugacity level III: $6.5 \times 10^{-15}$ to air, 45.3% to water, 54.6% to soil, 0.0755% to sediment. Phosphates, whether water or citrate soluble, are translocated in the soil only over very short periods and are then immobilized.
<b>Toxicity:</b>	Inorganic phosphates have the potential to increase the growth of freshwater algae, whose eventual death will	
<b>Degradation Products:</b>	<b>Biodegradation:</b>	The Phosphorus cycle is well understood. Phosphates are converted to calcium or iron/aluminum phosphates or are incorporated with the organic soil matter.
	<b>Photodegradation:</b>	No data available



# Safety Data Sheet

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Version: 1

## 13. Disposal Considerations

### Waste treatment methods

**Sewage disposal recommendations:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**Water disposal recommendations:** Place in an appropriate container and dispose of the contaminated material at a licensed site.

**Additional Information:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

## 14. Transport Information

In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ICAO / IATA

### **UN number**

No dangerous good in sense of transport regulations.

### **UN proper shipping name**

Not applicable

### **Additional information other information:**

No supplementary information available.

### **Overland transport**

No additional information available

### **Transport by sea**

No additional information available

### **Air transport**

No additional information available

## 15. Regulatory Information

### **U.S. Federal Regulations**

<b>(DAP) Diammonium phosphate (7783-28-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

### **US State regulations**

No additional information available

### **Canadian regulations**

<b>Diammonium phosphate (7783-28-0)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.



# Safety Data Sheet

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## 16. Other Information

**NFPA:**

Health Hazards	1
Flammability	0
Instability	0

Full text of H- phrases

Eye Irrit. 2 – Serious eye damage/eye irritation Category 2

Skin Irrit. 2 – Skin corrosion/irritation Category 2

STOT SE 3 – H335 – May cause respiratory irritation.

H315 – Causes skin irritation.

H319 – Causes serious eye irritation.

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